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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1933

No. 274

CLARK'S FERRY BRIDGE COMPANY, APPELLANT,

vs.

THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA.

BRIEF FOR THE APPELLANT.

Statement of the Case.

This case comes before the Court upon appeal from the judgment of the Superior Court of Pennsylvania, and involves the constitutional validity of an order made by the Public Service Commission of the Commonwealth of Pennsylvania and affirmed by the Superior Court, fixing the rates to be charged by the appellant, a public service company. The appellant contends that the order and judgment appealed from are confiscatory and in violation of the due process and equal protection clauses of the Fourteenth Amendment to the Constitution of the United States, and prosecutes this appeal under the provisions of Section 237(*a*) of the Judicial Code, as amended. A statement as to

jurisdiction has been filed and separately printed, pursuant to Rule 12 of this Court.

Clark's Ferry Bridge Company, the appellant, has, since 1915, owned and operated a toll bridge across the Susquehanna River at Clark's Ferry in the State of Pennsylvania. Its rates of toll are subject to regulation by the Public Service Commission of that state, which is a governmental commission created by, and exercising authority under, the Public Service Company Law of Pennsylvania (Act of July 26, 1913, P. L. 1374; Purdon's Penna. Statutes, Annotated, Title 66).

The appellant company was incorporated in 1915 and purchased an old covered wooden bridge which was in a bad state of repair. By the expenditure of substantial sums of money for repairs and the replacement of piers and spans (R. 787a-788a) it was made safe and adequate for all of the traffic which then crossed it, for the roads which led to it were not improved, and at certain seasons of the year were almost impassable (R. 681a-684a). The revenues at that time were not large (R. 785a), and the former owner and operator of the bridge permitted it to be sold at foreclosure sale, rather than expend the money necessary to make the needed repairs.

From 1921 to 1924, however, traffic increased to such an extent that this old bridge was rapidly becoming obsolete and the company determined to scrap their investment and build a new and modern concrete bridge just fifty feet downstream from the old.

Plans and specifications for the new bridge were prepared by Frank M. Masters, a bridge engineer of wide experience (R. 619a, 147a), who served also as the construction engineer. Bids were solicited and received from eight responsible and experienced contractors and on June 10, 1924, a contract was let to The Vang Construction Com-

pany of Cumberland, Maryland. The itemized bids of these several contractors are tabulated in Respondent's Exhibit No. 2 (R. 549a). The bid of Vang Construction Company was approximately $100,000 less than the next lowest bid, and was so low that the engineer was seriously concerned about it and suggested that the bid be reconsidered (R. 152a-154a). Another bidder, known to the engineer to be a most careful and accurate estimator was consulted. He re-examined his bid and reported that he could not possibly reduce it. The lowest bidder likewise re-examined his bid and reported that although he knew he had made a very low bid he hoped to come out on the job by reason of the fact that he had a large amount of equipment standing idle, and by using it he hoped to finish the job ahead of time and earn a substantial bonus (R. 153a). The contract allowed a construction period of 15⅔ months and a bonus of $150 per day for each day of earlier completion (R. 611a). The contractor completed the bridge 147 days ahead of the allotted time, and earned a bonus of $22,050 (R. 464a). In spite of this bonus, however, he had an out-of-pocket loss of $61,140 on labor and materials and $82,000 on plant overhead and depreciation (R. 608a). The new bridge was opened to traffic on May 30, 1925.

There have been two rate cases before the Commission, one begun in 1925 and the other in 1930. The records of both cases are contained in the record in this case, and a history of both cases is necessary in order to present the issues raised by this appeal.

Approximately 85 per cent of the company's revenue is received from ordinary passenger automobiles. A rate of 25 cents for such vehicles had been in effect in 1915 when the appellant purchased the property and this rate was continued after the new bridge was completed.

On August 11, 1925, a complaint was filed with the Public Service Commission alleging that the rates then in effect were unreasonable. At the hearings the company contended that although the bridge had been recently built, and the amount paid to the contractor was definitely known, the fair value of the property was greater than the original cost. It showed that the actual cost of the bridge structure to the company had been $754,751, and the value of that part of the old bridge property which remained used and useful in the new property was $52,101. In support of its contention that the fair value was in excess of the cost to the company it showed that the contractor had made too low a bid, and had lost $61,140 upon labor and materials alone, $82,000 on plant overhead and depreciation, and $70,000 additional would have been his fair profit on the contract. The sum of these items was $1,019,993, which the company contended was a reasonable estimate of the fair value of the property devoted to public use (R. 438a).

On June 8, 1926 the Commission filed its report and order (R. 485a-506a) (8 Pa. Pub. Serv. Com. Rep. 61) in which it found that the rates were unreasonable, that the fair value of the property for rate purposes was $767,800 and that its allowable annual gross revenue was $85,905. The order directed the filing of "a tariff schedule which will provide toll rates designed to yield annual gross revenue not in excess of $85,905" to become effective July 1, 1926, and the report suggested the reduction of the 25 cent rate to 15 cents.

The valuation of the property thus fixed was based wholly upon the original cost paid by the company to its contractor (R. 493a, 499a-500a), although the evidence that the actual cost of construction to the contractor was substantially greater, was not disputed (R. 607a-608a; Ex. No. 5 at 438a; 635a-636a; 708a; 152a-154a).

The company appealed from this order to the Superior Court, which heard argument and later set the case down for re-argument (R. 827). Meanwhile traffic had so increased that the company could reduce its 25 cent rate to 15 cents and still receive a fair return upon the value which it claimed for its property (R. 452a). In this situation it withdrew its appeal and filed a new tariff on March 1, 1927, fixing a 15 cent rate, which tariff was accepted by the Commission as a compliance with its order. The rates fixed by this tariff continued in effect until July 1, 1929, when the company voluntarily reduced its 15 cent rate to 10 cents, which rate is now in effect.

On January 14, 1930, the Commission, on its own motion began the present proceeding (R. 13a). The company filed an answer (R. 14a). The Commission, having the burden of proof, offered in evidence its report and order in the former case (R. 39a), the annual reports of the company filed with the Commission for the years 1926, 1927 and 1928, and a detailed report of an examination of the company's books and accounts, prepared by its accountant (R. 41a, 423a-462a); and rested its case.

The company offered in evidence the material parts of the prior record (R. 213a, 596a-793a), a complete appraisal of the reproduction cost new, and accrued depreciation of its property, (R. 57a, 507a-539a), and the oral testimony of the two engineers who made the appraisal, of the engineer who designed and constructed the bridge, and of an engineer who had made a special study to determine the amount of the allowance which should be made annually for depreciation and maintenance.

The Commission, in rebuttal, called one of its own engineers who offered in evidence his appraisal of the reproduction cost new and accrued depreciation of the property.

The Commission offered no evidence or estimate of the allowance for annual depreciation.

On February 2, 1932 the Commission filed its report and order in the present case (R. 15a) (11 Pa. Pub. Ser. Com. Rep. 222). This report discussed some of the evidence, but made no specific findings. It declared that the valuation of the property made by it in the former case, of $767,800, which was the original cost of the property to the company, was conclusive upon the company and should not be reopened and reconsidered because it did not appear that there had been an increase in the level of prices of labor and materials since the first inquiry was made (R. 15a-16a, 29a-30a). Its order directed the company to file a new tariff "calculated to produce an annual gross revenue of *not more than* $84,125," (R. 34a), which was made up as *follows (R. 32a):*

Fair return (7% on $767,800)	$53,746
Annual Expenses	22,700
Annual Depreciation	7,678
Total	$84,124

As tentative rates intended to produce revenue of "not more than" this amount, it prescribed a rate of 8 cents in lieu of the existing 10 cent rate for ordinary passenger automobiles, with still lower rates to frequent users of the service (R. 34a-35a).

An appeal was taken from this order to the Superior Court of Pennsylvania, the tribunal charged with the duty of reviewing all the testimony and of determining upon its own independent judgment of the facts and law, whether the order appealed from was confiscatory (*Ohio Valley Water Co.* v. *Ben Avon Borough,* 253 U. S. 287). The appeal asserted that the order was confiscatory and in viola-

tion of the due process and equal protection clauses of the Fourteenth Amendment (21st and 22d Assignments of Error, R. 11a-12a).

The Superior Court reviewed the evidence and declared that in its independent judgment the total annual gross revenue should be increased by $1,331 to $85,455 (R. 847), and that the order in all other respects should be affirmed. The order, as modified and affirmed by the Superior Court, fixed the *maximum* gross annual revenue of the company for the future at $85,455, made up as follows (R. 847):

Fair return (7% upon $767,800)	$53,746
Operating expenses	22,700
Annual depreciation	7,678
Annual bond amortization	1,331
Total annual gross revenue	$85,455

The particular schedule of rates prescribed by the order is not material, for it is merely tentative, and will be changed by the Commission from time to time so as to produce revenue not in excess of $85,455.

The appellant contends that the order is confiscatory both by reason of its substance and by reason of its form. In substance, because the rate base, and the annual gross revenue are too low. And in form, because it fixes as a *maximum* gross revenue an amount which, upon the findings of the Commission and the Superior Court, is the *minimum* necessary to avoid confiscation.

Although the opinion of the Superior Court declares in words that its conclusion is the result of the exercise of its own independent judgment, the appellant believes and contends that in fact that court merely concluded that the valuation found by the Commission in the former case was conclusive upon the company because no increase in price levels had been shown (R. 833).

Thus the effect of the decisions of the Commission and of the Superior Court was to give controlling weight at the time of the inquiry in 1930 to the cost actually paid by the company for its property in 1925, notwithstanding the evidence which showed that the fair value of the property, both in 1925 and 1930, was in excess of cost to the company, and notwithstanding the evidence that reproduction cost new less accrued depreciation in 1930 was in excess of such cost.

A petition by the company to the Supreme Court of Pennsylvania for the allowance of an appeal from the judgment of the Superior Court (R. 848) having been refused (R. 854), the appellant appealed to this Court (R. 861).

Assignment of Errors.

1. The Superior Court of Pennsylvania erred in finding that the fair value of the appellant's property was $767,800, and in refusing to find that the order of the Public Service Commission based upon that valuation was confiscatory and in violation of the due process clause of the Fourteenth Amendment to the Constitution of the United States.

2. The Superior Court of Pennsylvania erred in finding that the gross annual revenue to which the appellant was entitled was $85,455, and in refusing to find that the order of the Public Service Commission was confiscatory and in violation of the due process clause of the Fourteenth Amendment to the Constitution of the United States.

3. The Superior Court of Pennsylvania erred in giving controlling weight to the original cost paid by the appellant for its property, as found by the Public Service Commission in 1926 in a prior proceeding, and in failing to give due weight (1) to the fact that the actual cost of construction was greater than the amount which the appellant paid,

and (2) to the cost of reproduction as of the time of the inquiry.

4. The Superior Court of Pennsylvania erred in finding that $26 per cubic yard of concrete used in arch rings, walls, etc. (Item 10 of Inventory), was a reasonable unit price to be used in estimating the reproduction cost of the appellant's bridge property.

5. The Superior Court of Pennsylvania erred in finding that .046 cent per pound of reinforcing steel bars (Item 17 of Inventory), was a reasonable unit price to be used in estimating the reproductioin cost of the appellant's bridge property.

6. The Superior Court of Pennsylvania erred in approving the finding of the Public Service Commission that the value of certain earth fill, which formed part of a former bridge structure and which was used, useful and necessary to the present bridge structure, should be depreciated because it was second hand.

7. The Superior Court of Pennsylvania erred in its valuation of the appellant's property, in giving controlling weight to the intangible costs and indirect construction costs actually paid by the appellant, and in giving no weight to the estimates of such costs which would necessarily be incurred in the reproduction of the property new as of the time of the inquiry.

8. The Superior Court erred in finding that the appellant was not entitled to a fair return upon the special value which is inherent in its real estate because of its favorable location for bridge purposes.

9. The Superior Court erred in finding that an allowance of $7,678 for annual depreciation was fair and reasonable to the appellant.

10. The Superior Court erred in finding that a return of 7 per cent of the appellant's property was a fair and reasonable return to the appellant.

11. The Superior Court of Pennsylvania erred in affirming the order of the Public Service Commission and dismissing the appellant's appeal.

I.

The valuation placed by the Commission and the court upon the appellant's property results in a taking of its property without due process of law.

A.

THE VALUATION WAS BASED WHOLLY ON ORIGINAL COST TO THE COMPANY.

(a.)

The order of the Commission and the judgment of the Superior Court treated the valuation of the appellant's property, made in 1925 in a prior proceeding, as res judicata, and as conclusive upon the appellant in this proceeding.

In the prior proceeding in 1925 in which the rates of the appellant were challenged, the Commission found that the fair value of the appellant's property was $767,800. This was one of several subordinate findings upon which it based its conclusion that the then rates were unreasonable and that lower rates must be made effective. The company appealed to the Superior Court where the case was argued and later set down for reargument.

Meanwhile, however, the traffic over the bridge had so increased that it was obvious that if the appeal were pursued to a final conclusion, the effective portion of the Com

mission's report and order, which was the portion fixing rates, would have to be affirmed by the court, even though the appellant were successful in fully sustaining all of its contentions on questions of valuation and operating expenses. It seemed to be a needless waste of time to pursue the litigation and secure final determinations upon a number of subordinate facts, when the ultimate facts—the reasonableness of the rates and what rates should prevail in the future—had become moot because of a change of circumstances. For this reason the appeal was voluntarily withdrawn and the controlling rate was reduced from 25 cents to 15 cents.

In the present proceeding the Commission and the Superior Court have held that the valuation of the bridge property as of 1925 became *res adjudicata;* that the appellant was precluded in this proceeding from any contention that the former valuation was erroneous when made; and that unless the evidence showed a substantial increase in price levels between 1925 and 1930, the former valuation was binding and conclusive upon the appellant in this case.

That the Commission so held is evident, we believe, from a reading of its report. At the outset it declared (R. 16a):

> "On June 9, 1926, the Commission issued its report and order in that complaint (*Herring et al.* v. *Clark's Ferry Bridge Company,* 8 Pa. P. S. C. 61) fixing the fair value of the company's property at $767,800 and requiring that the rates, 25 cents for ordinary automobiles, be reduced to produce a gross revenue not exceeding $85,905 a year. The company, however, appealed the decision to the Superior Court and the order did not become effective until March 1, 1927, when the appeal was withdrawn. The Commission's finding of value thereupon became conclusive upon the company and tariff No. 3 was filed, prescribing among others a 15-cent rate for ordinary passenger automobiles and commonly known as the 15-cent tariff."

And in concluding, it declared (R. 29a-30a):

> "Having made a complete valuation of this property in 1926 and having ascertained that cost conditions have not changed materially since that time, the Commission is of the opinion that it is not required to reopen the entire question of valuation merely because the company concerned desires it. Nor is there anything in the evidence adduced which is persuasive that in this particular case justice requires a reopening of the prior valuation."

The Commission is required in rate cases to make specific findings of the facts that support its conclusion (*Scranton-Spring Brook Water Service Co.* v. *Public Service Commission*, 105 Pa. Superior Ct. 203, 160 Atlantic 230). It made none in this case. The Superior Court excused its failure to do so upon the following ground (R. 833):

> "Having reached the conclusion that appellant's evidence did not show such changes in conditions or price levels as would entitle it to have the previous adjudication of fair value opened and revised, there was no occasion for the commission to make specific findings as to the reproduction cost of the items of physical property concerning which the engineers disagreed, or with reference to controverted overheads and intangible costs."

The Superior Court adopted the same view as the Commission with respect to the legal effect of the former valuation and the withdrawal of the company's appeal (see R. 830-833). After considering at some length the conclusion of the Commission and the contention of the appellant upon the point, the court said (R. 833):

> "The same contention was made in the former proceeding; the burden of appellant's present complaint seems to be, not that conditions or price levels have so changed as to require a new valuation, but that the

original valuation by the commission was too low. *This argument seems to ignore the legal effect of the withdrawal by the appellant of its appeal from that valuation.*" (Italics ours.)

Again, at page 836 of the record, the court said:

"Therefore our conclusions with respect to the direct cost of reproducing appellant's physical property can have but slight bearing upon *the main question, whether the evidence, as a whole, made it the duty of the commission to re-open its former valuation.*" (Italics ours.)

It seems quite clear, from a reading of the report of the Commission and the opinion of the Superior Court, that both of these tribunals treated the valuation of the appellant's property, made by the Commission in 1925, as *res judicata*, and declined to consider any evidence in this case which might tend to prove that that finding of value was erroneous at the time it was made.

(b.)

The finding of fair value made in the former proceeding was not res judicata, nor conclusive in this case.

The former proceeding was a complaint against the then existing rates of the appellant. It was intended to and did result in an order making rates.

It is well settled that the function of making rates is a legislative, and not a judicial function.

Keller v. *Potomac Elec. Ill. Co.*, 261 U. S. 428, 440.
Knoxville v. *Knoxville Water Co.*, 212 U. S. 1, 8.
Ohio Valley Co. v. *Ben Avon Borough*, 253 U. S. 287, 289.
Louisville & Nashville R. R. Co. v. *Garrett*, 231 U. S. 298, 305.
Prentis v. *Atlantic Coast Line Co.*, 211 U. S. 210, 226.
Terminal R. R. Assn. v. *U. S.*, 266 U. S. 17, 30.

In jurisdictions, where as in Virginia, an appeal is allowed from the Commission to a court, and the court is empowered to substitute its own judgment as to the propriety of rates for that of the Commission and thereby to make rates for the future, the act of the appellate court in so doing is a legislative act.

Prentis v. *Atlantic Coast Line Co.*, 211 U. S. 210.

In other jurisdictions, such as Vermont, Michigan and Arkansas, where the courts on appeal have jurisdiction to determine, on their own independent judgment of facts and law, *only the question of confiscation*, then the proceedings in the appellate courts are judicial proceedings, and their decisions are judicial acts.

Bacon v. *Rutland R. R. Co.*, 232 U. S. 134.

Detroit & Mackinac Ry. Co. v. *Michigan R. R. Co.*, 203 Fed. 864, affirmed in 235 U. S. 402.

Helena Water Co. v. *Helena*, 277 Fed. 66.

A judicial proceeding involving a rate is not, and cannot be, begun until the last body having legislative power to make rates has passed upon it and determined the rate. "No rate is irrevocably fixed by the State until the matter has been laid before the body having the last word" (Mr. Justice Holmes in *Prentis* v. *Atlantic Coast Line Co.*, 211 U. S. 210, 231).

Since the order of the Commission fixing rates in the former Clark's Ferry Bridge case was a legislative act, and not a judgment, it was not *res judicata*.

> "The decision of a court or other body is not res judicata unless it is one made by the body while acting in a judicial, as distinguished from an executive, ministerial, or legislative capacity."
>
> 34 *Corpus Juris* 874-875.

This principle, as well as those which we have just stated above, is clearly set forth by Mr. Justice Holmes in *Prentis v. Atlantic Coast Line Co.*, 211 U. S. 210. In that case the Virginia State Corporation Commission, acting under statutory authority, published notice of a time and place when it would hear objections to an order prescribing a maximum rate of 2 cents per mile for passenger transportation by the railroads. Hearing was had and the railroads appeared and made objections. Later the Commission made its order fixing this rate. Thereupon the Atlantic Coast Line filed a bill in equity in the Circuit Court of the United States against the members and clerk of the Commission to enjoin them from enforcing its order fixing the objectionable rate. The defendants demurred on the ground that proceedings before the Commission were proceedings before a court, which the courts of the United States were forbidden by R. S. Section 720, to enjoin, and also that the decision of the Commission made the legality of the rates *res judicata*.

This Court held that the fixing of a rate is a legislative, not a judicial, act, even though the tribunal which fixed it was clothed with judicial powers; and therefore an order fixing rates was not *res judicata*. Mr. Justice Holmes speaking for the Court said (pp. 226-228):

> "But we think it equally plain that the proceedings drawn in question here are legislative in their nature, and none the less so that they have taken place with a body which at another moment, or in its principal or dominant aspect, is a court such as is meant by Sec. 720. A judicial inquiry investigates, declares and enforces liabilities as they stand on present or past facts and under laws supposed already to exist. That is its purpose and end. Legislation on the other hand looks to the future and changes existing conditions by making a new rule to be applied thereafter to all or some part of those subject to its power. The establishment

of a rate is the making of a rule for the future, and therefore is an act legislative not judicial in kind, as seems to be fully recognized by the Supreme Court of Appeals, *Commonwealth* v. *Atlantic Coast Line Ry. Co.*, 106 Virginia 61, 64, and especially by its learned President in his pointed remarks in *Winchester and Strasburg R. R. Co. and others* v. *Commonwealth*, 106 Virginia 264, 281. See further *Interstate Commerce Commission* v. *Cincinnati, New Orleans & Texas Pacific Ry. Co.*, 167 U. S. 479, 499, 500, 505; *San Diego Land & Town Co.* v. *Jasper*, 189 U. S. 439, 440.

"Proceedings legislative in nature are not proceedings in a court within the meaning of Rev. Stats. Sec. 720, no matter what may be the general or dominant character of the body in which they may take place. *Southern Ry. Co.* v. *Greensboro Ice & Coal Co.*, 134 Fed. Rep. 82, 94, affirmed *sub nom. McNeill* v. *Southern Ry. Co.*, 202 U. S. 543. That question depends not upon the character of the body but upon the character of the proceedings. *Ex parte Virginia*, 100 U. S. 339, 348. They are not a suit in which a writ of error would lie under Rev, Stats. Sec. 709, and Act of February 18, 1875, c. 80, 18 Stat. 318. See *Upshur County* v. *Rich*, 135 U. S. 467; *Wallace* v. *Adams*, 204 U. S. 415, 423. The decision upon them cannot be *res judicata* when a suit is brought. See *Reagan* v. *Farmers' Loan & Trust Co.*, 154 U. S. 362. And it does not matter what inquiries may have been made as a preliminary to the legislative act. Most legislation is preceded by hearings and investigations. But the effect of the inquiry, and of the decision upon it, is determined by the nature of the act to which the inquiry and decision lead up. A judge sitting with a jury is not competent to decide issues of fact; but matters of fact that are merely premises to a rule of law he may decide. He may find out for himself, in whatever way seems best, whether a supposed statute ever really was passed. In *Pickering* v. *Barkley*, Style, 132, merchants were asked by the court to state their understanding as an aid to the decision of a demurrer. The nature of the final act

determines the nature of the previous inquiry. As the judge is bound to declare the law he must know or discover the facts that establish the law. So when the final act is legislative the decision which induces it cannot be judicial in the practical sense, although the questions considered might be the same that would arise in the trial of a case. If a state constitution should provide for a hearing before any law should be passed, and should declare that it should be a judicial proceeding *in rem* and the decision binding upon all the world, it hardly is to be supposed that the simple device could make the constitutionality of the law *res judicata,* if it subsequently should be drawn in question before a court of the United States. And all that we have said would be equally true if an appeal had been taken to the Supreme Court of Appeals and it had confirmed the rate. Its action in doing so would not have been judicial, although the questions debated by it might have been the same that might come before it as a court, and would have been discussed and passed upon by it in the same way that it would deal with them if they arose afterwards in a case properly so called. We gather that these are the views of the Supreme Court of Appeals itself. *Atlantic Coast Line Ry. Co.* v. *Commonwealth,* 102 Virginia 599, 621. They are implied in many cases in this and other United States courts in which the enforcement of rates has been enjoined, notwithstanding notice and hearing, and what counsel in this case call litigation in advance. Legislation cannot bolster itself up in that way. Litigation cannot arise until the moment of legislation is past. See *Southern Ry. Co.* v. *Commonwealth,* 107 Virginia 771, 772."

It further appeared in the case that the law of Virginia gave the railroads a right to appeal from the order of the Commission to the Supreme Court of Appeals which had authority "to substitute such order as in its opinion the Commission should have made." The court then considered whether the railroad should first have taken such

an appeal before filing its bill in the Federal Court. And in the consideration of this question Mr. Justice Holmes said (p. 229):

> "* * * The question to be decided (by the Court of Appeals), we repeat, is legislative, whether a certain rule shall be made. Although the appeal is given as a right, it is not a remedy, properly so called. At that time no case exists. We should hesitate to say, as a general rule, that a right to resort to the court could be made always to depend upon keeping a previous watch upon the bodies that make laws, and using every effort and all the machinery available to prevent unconstitutional laws from being passed. It might be said that a citizen has a right to assume that the constitution will be respected, and that the very meaning of our system in giving the last word upon constitutional questions to the courts is that he may rest upon that assumption and is not bound to be continually on the alert against covert or open attacks upon his rights in bodies that cannot finally take them away. It is a novel ground for denying a man a resort to the courts that he has not used due diligence to prevent a law from being passed."
>
> * * * * * * *
>
> "If the rate should be affirmed by the Supreme Court of Appeals and the railroads still should regard it as confiscatory, it will be understood from what we have said that they will be at liberty then to renew their application to the Circuit Court, without fear of being met by a plea of *res judicata*. * * *"

The order in the former case did not become *res judicata* because there was an appeal to the Superior Court, which was later withdrawn. No judgment was ever rendered in that case.

The Superior Court is the tribunal which is charged by the law with the duty of reviewing the evidence in rate

cases, and of determining, upon its own independent judgment of the facts and the law, whether the order complained of was confiscatory.

Act of July 26, 1913, P. L. 1374, Art. VI, Sec. 17, as amended by *Act of June* 3, 1915, P. L. 779, Sec. 3; *Purdon's Penna. Statutes Annotated,* Title 66, Sec. 811. *Id.,* Art. VI, Sec. 22, as amended by *Act of June* 12, 1931, P. L. 530, *Purdon,* Title 66, Sec. 836.

Ohio Valley Water Co. v. *Ben Avon Borough,* 253 U. S. 298.

Ben Avon Borough v. *Ohio Valley Water Co.,* 271 Pa. 346.

There was no judicial proceeding in the former case until the company filed its petition for appeal in the Superior Court. That petition was the beginning of a judicial proceeding. The appeal was voluntarily withdrawn by the company, with allowance of the court, and no adjudication was ever made.

A voluntary withdrawal or dismissal or discontinuance of an action does not render the matters involved in that action *res judicata* (34 *Corpus Juris,* 786-787). The legal effect of the withdrawal of the company's appeal to the Superior Court was to permit the legislative order of the Commission to go into operation, but it did not render the findings which the Commission made in support of its order, and which were legislative in character, *res judicata.*

(c.)

The finding of fair value in the former proceeding was based solely on original cost of the bridge property to the company.

This is evident from a reading of the report of the Commission in the former proceeding (R. 485a-506a), the report

of the Commission in the present case (R. 15a-35a), and the opinion of the Superior Court (R. 824a-847).

The effect of treating the former valuation based upon original cost as *res judicata* was to give controlling and conclusive weight to original cost in the valuation made in the present case. This is contrary to the well settled rule of this Court that a public service company is entitled to a fair return upon the *fair present value* of its property used and useful in the public service, although this value be greater than the *original cost.* To fix a lower value is confiscation.

Willcox v. *Consolidated Gas Co.,* 212 U. S. 19, 52.
Minnesota Rate Cases, 230 U. S. 352, 454.
Denver v. *Denver Union Water Co.,* 246 U. S. 178, 191.
Galveston Elec. Co. v. *Galveston,* 258 U. S. 388.
S. W. Tel. Co. v. *Public Service Commission,* 262 U. S. 276, 287.
Bluefield Waterworks v. *Public Service Commission,* 262 U. S. 679, 689.

And in order to determine present value, the cost of reproducing the property is a relevant fact which must be given most serious consideration, even though it is not an exclusive criterion of value.

Los Angeles Gas Co. v. *R. R. Comm.,* 289 U. S. 287, 307.
McArdle v. *Indianapolis Water Co.,* 272 U. S. 400, 410.

It is true that in the *Los Angeles Gas case, supra,* this Court, in speaking of original cost, said (p. 306):

> "We have said that 'such actual cost will continue fairly well to measure the amount to be attributed to the physical elements of the property so long as there is no change in the level of applicable prices.' *McArdle* v. *Indianapolis Water Co.,* 272 U. S. 400, 411."

But this, we believe, had reference only to the usual case in which actual cost of the property to the utility was the

fair value of the property at the time it was purchased, and did not refer to any case in which the utility paid substantially less than fair value of the property at the time of purchase.

B.

THE ORIGINAL COST PAID BY THE APPELLANT TO ITS CONTRACTOR IN 1925 WAS LESS THAN THE FAIR VALUE OF THE BRIDGE PROPERTY AT THAT TIME.

We believe that the record clearly shows that the appellant acquired its bridge property for substantially less than its fair value in 1925. This appears from the following facts, which are not contradicted: (1) The contractor sustained an out-of-pocket loss of $143,140 in the construction of the bridge, (2) seven other contractors, who were keenly interested in getting the work, presented bids which were all substantially higher, and (3) the Commission's engineer, valuing the same property in 1930, with price levels which he said were no higher than 1925, found a value substantially in excess of the amount paid by the company to the contractor.

(1) The company solicited and received bids from eight experienced contractors (R. 152a-154a). These bids are tabulated in Respondent's Exhibit No. 2 (R. 549a). The bid of Vang Construction Company, to whom the contract was awarded, was so low that the engineer thought it would be unfair to accept it without giving him an opportunity to reconsider it. This was done and, although he realized that the bid was extremely low, he thought he could come out all right because he had an unusual amount of equipment idle, and he thought that by the employment of this idle equipment he could succeed. He counted, in part, upon earning a substantial bonus for early completion; and he did earn and receive a bonus of $150 per day

for 147 days, or $22,050 (R. 464a). But, notwithstanding the receipt of this bonus, he actually spent for labor and materials $61,140 more than he received under his contract, and $82,000 additional for plant overhead and depreciation (R. 608a).

Prima facie, therefore, the company received property which actually cost $143,140 more to produce than the appellant paid for it. The Commission sought to avoid this conclusion by suggesting that the losses sustained by the contractor were entirely due to flood conditions which occurred while the bridge was being constructed (R. 20a). The only scrap of evidence to sustain such a conclusion is a remark by L. A. Reinhard, auditor of Vang Construction Company, who said, "We would have made money *probably* if things would have gone along smoothly without any high water" (R. 610a). But this overlooks the fact that flood conditions in the Susquehanna are a condition of construction which must be met at any time, and the cost of constructing a bridge across this river must include losses which may be sustained from such causes. The same witness testified (R. 611a):

> "Q. You live in Cumberland, Md., and perhaps are not thoroughly familiar with the different stages of the Susquehanna River, but in your opinion, are there times during the year when the bridge could have been constructed when there was no danger of loss of materials through high waters?
>
> "A. Not as well as at the time we entered the bid, or right before the bid, that was the best time of the year. We studied the river and found, even before we bid on the job, and we found that that was the best time of the year to do it."

In the execution of every construction contract there are contingencies which may or may not occur, but which must be allowed for, and which are recognized as a part of the

cost of construction. The loss which may occur at any time, due to high water in the Susquehanna, is such a contingency. It is clear that the contractor in this case did not make sufficient allowance for it.

The Superior Court, discussing the same matter, added the observation that (R. 839):

> "Twenty thousand dollars additional spent on the coffer dam construction above the $30,000 spent by the contractor would probably have obviated the loss. Hence the utmost that the company could ask to be added to the contractor's figures would be, not the loss to the structure and the contractor's equipment and profits caused by the flood, but the loss of the enlarged cofferdam construction which would have prevented the loss."

There is not a word of testimony in the record to support this conclusion. There is no testimony as to whether the flood occurred before the coffer dams were constructed, or while they were in the river, or after the piers were completed and the coffer dams removed. There is no evidence that any of the loss occurred in connection with the coffer dams or by reason of their inadequacy. This whole finding of the court was based upon a speculation injected into the brief of the Commission's counsel when the case was before the Superior Court. He said: "Had the coffer dams been made higher and stronger this might not have occurred." But there is not a scintilla of evidence in the record to support it.

Nor is there any evidence whatever to support the suggestion that the loss of the contractor may have been due to bad judgment. If the Commission entertained such an opinion, it might readily have ascertained the fact by inquiring of the construction engineer of the company, who was a witness at the hearings both in the former and in the

present case. That the contractor was mistaken in his estimate of the cost of the work, is obvious. But there is no evidence that there was any error of judgment in the execution of the work which resulted in any loss.

(2) Seven other contractors who were keenly interested in getting the work (R. 152a) presented bids (R. 549a). They were all substantially higher. The next higher bid was $98,254 more. The engineer consulted H. E. Culbertson, whose bid was $104,469 above the low bid, and whom he knew to be a very careful and accurate estimator. Mr. Culbertson re-examined his bid and reported, "I cannot figure the job a penny below that bid" (R. 153a). The average of the other seven bids was $126,304 above the low bid.

The bids of these other contractors represented the deliberate opinion and judgment of men experienced in such construction work. Their judgment was that the cost of construction must be at least $100,000 more than the low bid.

(3) In addition the record shows that the Commission's engineer in the present case, although declaring that there had been no increase in price levels from 1925 to 1930, found that the reproduction cost of the same items of construction covered by the bid was $74,170 in excess of the low bid.

We believe that the evidence to which we have referred, and which stands uncontradicted, shows so clearly and conclusively that the amount paid by the company for the bridge property in 1925 was less than its actual cost, that the findings of the Commission and the court to the contrary must be considered arbitrary, and unsupported by evidence.

C.

THE ORIGINAL COST PAID BY THE APPELLANT FOR ITS PROPERTY IN 1925 WAS LESS THAN ITS FAIR VALUE IN 1930. FAIR VALUE IN 1930 WAS SUBSTANTIALLY GREATER THAN $767,800.

In the proceeding instituted by the Commission upon its own motion in 1930, the appellant put in evidence an appraisal of the cost of reproduction new, less accrued depreciation, which was made by James W. White and Paul B. Johnson, engineers in the employ of the American Appraisal Company. Their report of appraisal is designated in the record as "Respondent's Exhibit No. 1" and "Appendix to Respondent's Exhibit No. 1", and will be found at pages 507a-539a, and 540a-548a. The basis of this appraisal was the cost of reproduction new in like kind of the physical property as of September 1, 1929, with all additional expenditures required, over and above the bare cost of the physical property, to put the bridge in operation as an income producing property (R. 517a). This appraisal estimated the cost of reproduction new, less depreciation, to be $875,644.30 (R. 511a), exclusive of two other elements of intangible value which the appraisers referred to as "Attached Business Value" and "Location Value" (R. 523a-526a).

Subsequent to the presentation of this report, the Commission directed Lynn B. Curry, one of its own engineers, to make a similar appraisal. This was presented, is marked "Complainant's Exhibit No. 3", and will be found at page 465a of the Record. It was based upon prices prevailing during the last three months of 1930 (R. 228a). According to this estimate the cost of reproduction new, less depreciation, of the property was $741,871 (R. 465a).

A tabulated comparison of these two appraisals, indicating the items and amounts in which they differed, will be found at the end of the appendix to this brief.

The particular items, or elements of value, to which the appellant now directs the attention of the Court, as indicated in the assignment of errors (R. 861-863) and in the statement of points to be relied on (R. 864-866) are the following:

1. Item 10. Concrete used in arch rings, walls, etc.
2. Item 17. Reinforcing steel bars.
3. Earth fill.
4. Intangible costs.
5. Indirect construction costs.
6. Special value of location.

The appellant here contends that the findings made by the Superior Court with respect to these items of value were arbitrarily arrived at and are without any substantial support in the evidence, and that they should be set aside by this Court, under the rules declared in—

Northern Pac. Ry. v. *Dept. Public Works,* 268 U. S. 39, 42-45.

Chicago, etc. Ry. v. *Public Utilities Com.,* 274 U. S. 344, 351.

St. Louis & O'Fallon R. Co. v. *United States,* 279 U. S. 461, 484.

We shall discuss each of these elements of value as concisely as possible.

1.

ITEM 10—CONCRETE.

1:2:4: *Concrete in Arch Rings, Retaining Walls, Abutment Spandrel Walls, Arch Ring Saddles, Cross Walls, Road Curb, and Slab.* 9,496 *Cubic Yards.*

	Unit	Total	Difference
Appellant	$28.15	$267,312	$20,416
Commission	26.00	246,896	

The substantial difference between the appraisals in this item is notable because it is in marked contrast with the close correspondence between the estimates on other similar items.

The inventory contains seven items of concrete construction, which are identified as Items 6 to 12, inclusive. The differences in unit costs in six of these seven items are negligible. The comparative unit costs are as follows:

	Appellant	Commission
Item 6	$16.20	$16.00
" 7	15.45	15.50
" 8	16.20	16.00
" 9	14.80	15.00
" 11	27.75	28.00
" 12	4.90	4.90

The greatest variation in these unit costs is 25¢, and that variation is found in an item in which the Commission's cost is higher. A total of these unit costs shows the Commission to be higher by 10¢. It is only in Item 10, which is the largest single item in the inventory, that a material difference in unit cost is found. This indicates that in estimating this particular item the engineers on one side or the other erred. To discover this error, if possible, we have analyzed these unit costs. The unit cost used by the appellant's engineers is itemized at pages 103a-106a of the

Record. That of the Commission's engineer is itemized at pages 232a-233a. The comparative figures are as follows:

	Appellant		Commission
Material for concrete	$6.81		$6.70
Material for forms	6.04	Material *and labor* for forms	6.25
Total	$12.85		$12.95
Labor in handling and mixing concrete	$7.41		$8.50
Labor for building forms	2.00		.....
Total	$9.41		$8.50
Total labor and material	$22.26		$21.45
Contractor's overhead, 15%	3.34	10%	2.15
Contractor's profit, 10%	2.56		2.36
Total cost	$28.16		$25.96

While minor differences, which substantially offset each other, are to be found in these figures, there is one item of substantial difference which will account for almost the entire difference of $20,416 between the estimates of the engineers in valuing Item 10. That is the item of "Labor for building forms," for which Appellant's engineer allowed $2.00 in his unit price, and Commission's engineer made no separate allowance.

It does not appear why the Commission's engineer should have combined the items of material and labor for forms when he separated the items of material and labor for concrete. It would appear that the item of labor in making forms was entirely overlooked and that this oversight accounts for the difference between his estimate and that of Appellant's engineer.

It is evident that we cannot account for the difference by assuming that Mr. Curry, the Commission's engineer, used a lower labor cost than Appellant's engineers, for he has allowed $1.09 more than they for the labor in handling and mixing concrete. The labor in making forms is carpentry

labor, which is skilled labor and demands a higher wage. That used in handling and mixing concrete is largely unskilled labor. Nor can we account for the difference by supposing that his cost of material for forms was substantially less than that of Appellant's engineers, for in nearly every instance their material costs were very close.

It would appear from the cross-examination of Mr. Curry that he had no knowledge whatever of the cost of skilled carpentry labor necessary to construct forms (R. 381a-386a). The only inferences which can be drawn from the testimony respecting the unit cost of Item 10 are that Mr. Curry either omitted the item of labor for forms entirely from his estimate, or, being ignorant of the cost of such labor, he used an abnormally low figure.

In dealing with this item in its report, the Commission said (R. 22a):

> "Both engineers have demonstrated the composition of their figures both as to labor and materials and as to the actual concrete and the necessary forms. There is nothing in their evidence as to what they deem a reasonable allowance which would *compel the conclusion* that the Commission's engineer had not allowed an adequate amount for this work." (Italics ours.)

We believe that the arbitrary and prejudiced attitude which the Commission adopted in dealing with the evidence in this case is indicated by the above quotation from its report, as well as numerous similar conclusions stated therein. It must be remembered that the burden of proof in this case was clearly on the Commission. That fact is admitted in its report and declared in the opinion of the Superior Court. But notwithstanding that fact, the view which the Commission took of the evidence was that no finding should be made in favor of the company unless the evidence "compelled the conclusion."

With respect to this item of property, however, we submit that even if the erroneous standard used by the Commission were to be applied, then the evidence, when judicially considered, does compel the conclusion that the estimate of the Commission's engineer was erroneous and that of the appellant's engineers was correct.

The Superior Court, commenting upon this item said (R. 834):

> "An analysis of the testimony indicates that Appellant's engineers included an item of $2.00, 'Labor for building forms,' but the Commission's engineer made no separate allowance for this item. Our independent judgment is that the evidence indicates $26 is a proper and reasonable unit price to be used in making a reproduction cost estimate on this item. The bid of the contractor who built the bridge was $24 per cubic yard."

The Superior Court clearly appreciated the force of the contention the appellant makes as to the evidence respecting this item of value and was not content to rest its finding upon the engineers' estimate. It based its conclusion on the fact that the contractor who built the bridge in 1925 bid $24 per cubic yard for this item of concrete.

We have heretofore shown, in discussing the bid of the contractor made in 1924, that his estimates were abnormally low. Examination of the tabulation of all bids (R. 549a) shows that no other bidder estimated a unit cost for this item which was as low as the contractor who built the bridge, and the average unit price of the seven other bidders was $28.91.

2.

ITEM 17. REINFORCING STEEL BARS.

	Unit	Total	Difference
Appellant	$.0637	$68,778	
Commission	.046	49,667	$19,111

Item 17 of the inventory consists of 1,079,718 pounds of reinforcing steel bars. The difference in cost in the two appraisals is $19,111.

An analysis of the unit cost of the appellant's engineers will be found at page 101a, based upon costs per ton. An analysis of the unit cost of the Commission's engineer will be found at page 380a, based upon costs per pound.

The decimals involved in computing these costs upon the basis of the pound are so small that comparison is difficult. A comparison on the basis of costs per ton follows:

	Appellant		Commission
Cost of steel, f.o.b. cars	$39.00		$36.00
Freight from Pittsburgh	6.20		.....
Cost of steel delivered	$45.20		$36.00
Unloading, handling, cutting, bending, placing, wiring	26.70	Unloading and storing	10.00
Plant transportation and distribution	28.76	Handling and placing	26.00
Miscellaneous	.....		3.60
	$100.66		$75.60
Contractor's overhead, 15%	15.00	10%	7.56
	$115.66		$83.16
Contractor's profit, 10%	11.50	10%	8.31
	$127.16		$91.47

Mr. Johnson, one of the Appellant's engineers, explained on cross-examination that he included an item of $6.20 freight per ton from Pittsburgh. Inasmuch as there were available steel markets in Harrisburg and Steelton, we believe that it would be reasonable to reduce Mr. Johnson's unit cost on this account. If the freight were eliminated entirely it would reduce his estimate of the unit cost from $.0637 to $.0606; and the total reduction in this item would amount to $3,347. It seems, however, that Mr. Curry erred in the other direction, for although his price of $36.00 per ton was based upon prices f. o. b. cars, he made no allowance whatever for freight from Harrisburg or Steelton, the nearest available markets, to Clark's Ferry.

Aside from the item of contractor's overhead, which is partly compensated for by Mr. Curry's allowance of 5 per cent for miscellaneous costs, the substantial difference in these cost estimates is to be found in the item of "Unloading, handling, cutting, bending, placing and wiring," for which Mr. Johnson estimated $26.70 per ton. Mr. Curry allowed only for "Unloading and storing," $10.00 per ton, and apparently made no allowance for cutting, bending and wiring, which was an important part of the cost of placing the steel in the finished structure.

Mr. Johnson testifies that this cost must be borne by the builder. "Your mill price is for straight bars, stock lengths or random lengths. They are not fabricated by the mill" (R. 102a). And Mr. Masters pointed out (R. 174a) that that was one of the reasons why it was not fair to make a comparison of unit costs of the Columbia-Wrightsville Bridge and the Clark's Ferry Bridge. The steel in that bridge was made at Columbia, at the site of the bridge, was cut to the desired lengths, and was "put into place very simply." The failure of Mr. Curry to allow for this necessary cost in placing the reinforcing steel in the Appellant's bridge has made his estimate unreasonably low.

The Commission, in commenting upon the Appellant's unit cost, after omission of the item of freight, said (R. 22a):

> "The item is still unnecessarily high, however, in view of prices and conditions prevailing in the steel industry and the cost of steel used in other structures."

The record contains absolutely no evidence of what conditions prevailed in the steel industry. There were no conditions existing in that industry at the time of this appraisal (September 1, 1929) which would affect these estimates and which were sufficiently well known and under-

stood for the Commission to take judicial notice of them and base a finding upon them.

Nor was there any evidence of the cost of steel used in other structures excepting those of the Columbia-Wrightsville Bridge and the Coplay-Northampton Bridge. The uncontradicted evidence showed that the conditions under which the steel was placed in the former bridge were so different that they could furnish no fair criterion as to the cost of steel placed in this bridge (R. 174a-175a).

The unit cost in the case of the Coplay-Northampton Bridge was higher than the unit cost estimated by the Commission's engineer and lower than that of the Appellant's engineers. But there was no evidence whatever to show that the conditions surrounding the construction of that bridge were similar to those that would be encountered in reproducing this bridge. The Commission's engineer undertook to read into the record similar costs of many other bridges, but the Commission's counsel evidently realized that this evidence was of no value, for it was all withdrawn (R. 412a).

Nor can the prices of steel bars as given in Complainant's Exhibit No. 11 (R. 472a) be of any assistance in supporting the Commission's estimate, for its own engineer ignored them when he allowed $36.00 per ton for bars such as were used in this bridge.

But aside from these considerations, it is evident from the analysis of unit costs presented above that prices of steel and conditions prevailing in the steel industry which might affect the prices have nothing whatever to do with the difference in the engineers' estimates. The difference arises in the estimates of costs of handling and placing the steel in the field. The prices of material and the conditions in the industry could have nothing to do with such costs.

The Superior Court in discussing this item merely states the amounts of the two estimates and adds this conclusion (R. 835):

> "We are not convinced that the estimate of the Commission's engineer is unreasonably low on this item."

We believe the evidence clearly shows that the Commission's engineer failed to make any allowance for the cost of cutting, bending and wiring, which was an important part of the cost of placing the steel in the finished structure, and that the finding of the Superior Court was in arbitrary disregard of this evidence.

3.

EARTH FILL.

Parts of the former bridge structure used and useful in the present bridge.

Appellant	Commission	Difference
$39,900	$35,262	$4,638

The present bridge is located 54 feet (center to center) downstream from the site of the old bridge. This made it possible for the Appellant to retain and use, as part of its new bridge, the two abutments, retaining walls, approach fills, and real estate which belonged to the old one. Being on the up-stream side, these abutments, retaining walls and approach fills serve as a protection for the new structure. If they had not been there it would have been necessary to construct others at greater cost in order to provide such protection (R. 656a-659a). The Commission in its Report in the former case said (R. 495a-496a):

> "The Commission believes that Respondent exercised sound economic judgment in incorporating this portion of the old bridge property into the new bridge property now used and useful in the public service."

In the former case the Appellant claimed a value of $52,101.20 for this property, which included an item of $10,000 for real estate. The Commission allowed $49,100, making a deduction of $3,101.20 because, as it correctly said, the company's engineer had failed to depreciate his overheads or to allow for interest during construction. Exclusive of real estate the value claimed by the company was $42,101.20; and that allowed by the Commission was $39.100.

This same property has been valued, in the present case, as follows:

By appellant's engineers (Resp. Ex. No. 1, p. 31-R. 535a):

8,000 cubic yards earth fill @ $2.10	$16,800
2,200 cubic yards stone retaining wall @ $10.50	23,100
Total	$39,900

By the Commission's engineer (Comp. Ex. No. 6, R. 467a):

2 Abutments, 1,272 c. y. @ $18.50, @ 60% condition	$14,119.20
Retaining walls, 933 c. y. @ $16.00, @ 50% condition	7,464.00
Approach fills (8,000 c. y. @ $1.50 per c. y.)	12,000.00
Contingencies	1,679.16
Total	$35,262.36

The Commission in this case did not make any specific finding as to the value of this property, although it approved and sought to justify the estimate of its engineer (R. 23a-24a).

The difference in the appraisals of this property amounts to $4,638, and a comparison of the itemized estimates given above, shows that this difference lies in the item of 8,000 cubic yards of earth fill in the bridge approaches. The difference in the estimates on this item is $4,800, and is

due entirely to the difference in unit costs. The appellant's engineer used a unit cost of $2.10, which was made up as follows (R. 99a):

Cost of fill at Steelton, Pa	$.35
Freight to Clark's Ferry	.70
Total	$1.05
For the purpose of this appraisal this figure was taken as	1.00
Labor, overhead, plant charges	.68
Contingencies and profit	.42
Total	$2.10

The fact that fill could not be obtained in the vicinity of the bridge, or from the bed of the river was testified to by Mr. Johnson (R. 99a-100a) and by Mr. Masters (R. 149a) and was not contradicted. The freight rate was proved by the special tariff offered in evidence (R. 258a). And the fact that the total unit cost was reasonable is evidenced by the fact that Mr. Curry in item 2 of Complainant's Exhibit No. 3 valued 10,616 cu. yds. of earth fill for approaches at $2.30 per cu. yd. And the Commission found that this unit cost was reasonable, for it said (R. 23a):

> "Although this unit cost is conceded to be unusual and higher than was estimated when the bridge was built, there is substantial evidence that it is not an improbable cost for such work in this vicinity."

Under this evidence and finding there can be no justification for reducing this unit cost to $1.50.

On cross-examination Mr. Curry sought to justify it by saying that $1.50 was a depreciated unit cost (R. 362a). When we examine the make-up of his estimate as printed above, and observe that in each of the first two items he sets out the full unit price and the per cent of condition

found, and in this item he merely states the unit price, we are forced to the conclusion that this explanation was an afterthought. It would be interesting also to know what percentage of depreciation Mr. Curry used in arriving at this unit cost. In the case of the abutments he used 60 per cent, and in the case of retaining walls he used 50 per cent. The percentage in the case of the approach fill would be $\frac{1.50}{2.30}$ or .6521739+. Furthermore, if Mr. Curry used a depreciated unit cost in estimating this item, he has then duplicated his accrued depreciation upon it, for this item of property is included as part of the property upon which he has computed his accrued depreciation.

He further explained that he had depreciated this unit cost because Mr. Masters had done so in the former case (R. 362a). But in this he was mistaken, for an examination of the same item, as it appeared in Mr. Master's estimate in the former case (Schedule attached to Resp. Ex. No. 7 in former case; part of Resp. Ex. No. 4 in this case, R. 784a) shows that Mr. Masters did not depreciate this item. He merely used the unit cost of $1.50, which was the amount of the Vang Construction Co. bid on this item in 1924 (Item 2, Resp. Ex. No. 2, R. 549a).

The Commission accepted Mr. Curry's explanation, however, and approved his estimate, saying (R. 23a):

> "The lower cost adopted by the Commission's engineer for the old fill alone is based, however, upon the fact that it is the old fill adapted to its present uses and is not intended to be a cost of placing new fill. The Commission is of the opinion that if the fill is to be regarded in its entirety as used and useful property, it should be included at a price reflecting its second-hand nature, as was done in the prior proceeding."

As we have stated, the fill was not depreciated in the prior proceeding, and the Commission's statement, in this respect, is without any evidence to support it. Nor is there any evidence whatever in the record to support the innuendo that perhaps the old fill is not used or useful "in its entirety." And, assuming that it were proper to depreciate the item of approach fill, the record is barren of evidence showing that any such depreciation exists, or showing its estimated useful life or its expired life.

It is clear, however, that the conclusions of the Commission, and of its engineer, though not based upon any evidence, are based upon the supposition that earth fill for approaches, depreciates. This, we believe, is clearly erroneous. The fill which is involved in this case is the earth which is enclosed within the abutments and retaining walls. It has not changed in character or composition since it was originally placed there. If its condition has changed at all, it has become more valuable, because it has settled and become seasoned. With respect to such an item of property, we submit that there is no depreciation, and it is erroneous to speak of its "second-hand nature." It may be that if this fill were built up into an embankment such as forms the roadbed of some railroads, and were being gradually washed away by the action of the elements, that it would be proper to deduct depreciation, where it had actually occurred. But that is not the case with this property.

The Superior Court, approving the view of the Commission, added this conclusion (R. 836):

> "We do not disagree with these conclusions relative to this item. The company's engineers, at the first hearing, fixed the value of the old fill at $12,000, the figure used by the Commission's engineer."

The "Schedule attached to Respondent's Exhibit No. 7" (R. 784a) shows that the company's engineer in the prior

case, making up the reproduction costs new estimate of the old bridge property on the basis of average prices between 1913 and 1923, estimated a unit cost of $1.50 for the fill for approaches. It is too clear for argument or citation of authority, that an estimate based on average prices over the ten-year period from 1913 to 1923 cannot be made the basis of a finding of reproduction cost or fair value in 1930.

We believe that the Superior Court in basing its finding with respect to this item of property upon an assumed depreciation in earth fill and upon average prices between 1913 and 1923, has arbitrarily disregarded the evidence.

4. Intangible Costs.

5. Indirect Construction Costs.

The Superior Court made a comparison of the amounts which were estimated by the appellant's engineers as necessary to provide for intangible costs and indirect construction costs in a reproduction of the property new with a like estimate made by the Commission's engineer, and with the amounts which appeared to have been actually expended by the appellant in 1924 and 1925 (R. 838). It concluded that the actual expenditures made for these costs when the bridge was built more nearly represented their real value than the estimated percentages calculated by engineers (R. 839. It cited, as authority, the decision of this Court in *Wabash Valley Elec. Co.* v. *Young*, 287 U. S. 488. In that case it was said (p. 500):

> "Complaint is made that in determining the value of the Martinsville property no allowance was made for cost of financing. As the court below, however, pointed out, there was no evidence that such cost was incurred, or that it necessarily would be incurred in the event of reconstruction. This is also in accordance with the

findings of the master. We see no reason to interfere. See *Vincennes Water Supply Co.* v. *Public Service Com.*, 34 F. (2d) 5, 9."

We do not understand that decision, nor any other decision of this Court, to hold, however, that expenses which would be necessarily incurred in the reproduction of a property should not be included in the rate base merely because the company had not capitalized them. In fact the language quoted expressly excepts such expenditures as "necessarily would be expended in the event of reconstruction."

That there are many such expenses which would have to be made in the event of reconstruction is obvious. There was a preliminary engineering study made, before it was determined what type of new bridge should be constructed (R. 634a-635a). There was a complete inspection and study of the old bridge property, and a valuation and appraisal made and submitted to the appellant on Dec. 17, 1923, to determine the economic advisability of abandoning or continuing the old bridge. The report appears at page 773a of this record. Much data was prepared for submission to bankers, and there were many conferences with the bankers. Bonus to the Commonwealth of Pennsylvania upon the capital stock of the company was paid, as well as taxes upon the capital stock and bonds during the period of construction. These and other expenses, to which we shall later refer, were unquestionably actually incurred, but were paid out of the operating revenues of the old bridge and are not included in the intangibles actually paid for (R. 440a-441a). They would have to be paid if the bridge were reconstructed. Even the Commission's engineer recognized this fact and allowed two items of $8,000 each, to cover them. Yet the only actual expenditure shown, and included in the 1925 valuation, was $819. The item of bonus would amount to $850 and the item of taxes during construction would

amount alone to more than $5,000, as we shall show hereafter.

We submit that the Superior Court erred in applying the above quoted rule of *Wabash Valley Elec. Co.* v. *Young*, 287 U. S. 488, 500, to the evidence in this case; and that the conclusion reached by the Superior Court disregarded the evidence when it concluded that the amounts shown to have been paid for intangible and indirect construction costs correctly represented what would have to be expended upon reconstruction of the property. We shall, therefore, review the evidence relating to the engineers' estimates, a tabulation of which and of the amounts expended (as referred to by the Superior Court in its opinion, R. 838) follows:

	Appellant's Estimate	Commission's Estimate	Amount Expended[1]
Indirect Construction Costs:			
Engineering and supervision	43,027	43,000	39,272[3]
Administrative, legal and incidental	9,930	8,000	0
Interest during construction	38,145	22,000	20,912
Sub-total	91,102	73,000	60,184
Intangible Costs:			
Promotion and preliminary organization	10,125	8,000	819[4]
Organization and incorporation	10,125		
Cost of financing	58,090	37,500	37,523[5]
Interest on intangibles	3,980	0	0
Sub-total	82,320	45,500	38,342
Miscellaneous charges	.....	.....	4,271
Removing piers	.....	.....	21,950
Amount included by Superior Court in its total (R. 838) which we cannot identify	.....	.....	5,050[2]
Total	173,422	118,500	129,797[2]

[1] This column "Amount Expended" consists of those items referred to by the Superior Court in its opinion at R. 838, and seem to have been taken from R. 440a-441a, with certain changes and omissions.

Before considering these estimates we wish to direct the attention of the Court to certain portions of the testimony of Mr. Curry, the Commission's engineer, which we believe deprive his testimony respecting these elements of value of all credibility.

Although he admitted that preliminary engineering before construction would cost the company $3,000 to $4,000 (R. 311a-313a, 331a), he made no allowance for it, excepting as part of an item of $1,000 included in "Promotion and Organization" for preliminary study of traffic and costs (R. 327a-328a).

He admitted that he had made no study of stream flow or flood conditions (R. 321a), although these conditions vitally affect the cost of reconstruction.

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[2] We have not been able to locate any item or items which the Superior Court added to those given above, to make its total of $129,797 at R. 838.

[3] This item includes only the engineering charge in the construction of the new structure. It does not include engineering in the construction of the abutments, retaining walls and approaches which were carried over from the old bridge property, which amounted (before depreciation) to $3,967. See R. 442a, and 234a.

[4] This item was allowed by the Commission in the 1925 case (R. 500a). It covered the bare expense of incorporating a company in 1915 with $25,000 of stock (R. 717a).

[5] The amount actually expended for Cost of Financing was $74,522.86 as shown at R. 441a. The Commission in the 1925 case deducted $27,000 bond discount (R. 493a) which it allowed to be amortized over the life of the bonds (R. 494a). The Superior Court in this case has made the same allowance (R. 847). The Commission also deducted $10,000 of preferred stock, which was issued to the four incorporators as compensation for surrender of $50,000 of bonds held by them upon the old bridge property and the acceptance of $50,000 of preferred stock in payment therefor. After these deductions $37,523 remained.

He made no independent estimate of the cost of financing, but merely used the Commission's former allowance (R. 318a, 323a) although he admitted that the market for bonds was not as good in 1930 as in 1924 or 1925 (R. 324a).

He did not know how much bonus would have to be paid to the Commonwealth of Pennsylvania on capital stock (R. 336a) and after investigation later he allowed $650 (R. 473a) whereas the correct amount would be 1/5 of 1 per cent on $425,000 or $850.

He made no allowance for mortgage insurance, and did not have any idea what the rate or amount would be if such charge were incurred (R. 338a-339a).

He presented his estimate of reproduction cost new with a lump sum of $42,000 for coffer dams, but admitted that he had made no estimate of their cost until after the appellant demanded it (R. 363a).

He admitted that it would be necessary in the reconstruction of the bridge to build a trestle bridge or viaduct across the river for the handling of materials, but he made no estimate of the cost of such construction (R. 372a-378a).

He admitted that an allowance of at least $4,102.18 would have to be made for State and local taxes during construction, yet he allowed only $1,000 (R. 352a).

He excused his failure to allow interest during the period of construction upon the item $37,500 which he had allowed for cost of financing, by asserting that this cost would not be paid until the end of the period of construction (R. 313a-318a). When he was forced by cross-examination to admit that this was not true, and that this cost would have to be paid or contracted for before the contract was let, he then shifted his ground and declared that he had included interest on this item in his estimate of cost of financing (R. 318a). But when the company demanded that he submit an itemized estimate of his cost of financing,

and he produced this estimate (R. 473a) it was found that he had made no such allowance.

His testimony respecting intangible costs and indirect construction costs was so shifty, evasive and misleading as to rob it of all credibility.

Promotion and Preliminary Investigation.
Organization and Incorporation.
Administrative, Legal and Incidental Expenses.

The three items of appraisal listed above must be grouped for the purpose of comparison for the reason that an analysis of the items has disclosed that the engineers for the company and the Commission did not make the same classification of the intangible costs which enter into them.

The appellant's engineers estimated that the development and construction of the bridge property would pass through four periods:

(1) Promotion and Preliminary Investigation.
(2) Organization and Incorporation.
(3) Engineering and Financing.
(4) Actual Construction.

The costs which we shall consider at this point include all those which would be incurred during the first two periods, together with those costs incurred during the fourth period which may be classed as administrative, legal and incidental costs.

Promotion and Preliminary Investigation.—This period was described as follows (Resp. Ex. No. 1, p. 12, R. 517a):

> "Assuming the inception of the idea by a group of business men, it would be necessary for them to have an extensive investigation to determine the feasibility of the project, the best location and probable cost, the

necessary legal procedure, and to make traffic surveys and economic studies of all factors relevant to the success of the project. It is estimated that this investigation would require a period of at least a year."

The expenses to be incurred during this period were thus described (Resp. Ex. No. 1, p. 18, R. 522a; R. 58a-59a):

"This item includes the estimated cost of retaining the necessary engineering, legal, and other professional service to make preliminary investigations and reports to determine the feasibility and economic possibilities of the project, together with all traveling and miscellaneous expenses connected therewith, and reasonable compensation to the promoter."

Organization and Incorporation.—This period was described as follows (Resp. Ex. No. 1, p. 12, R. 518a):

"During this period, estimated at six months, the company would be incorporated, the organization perfected, necessary permits and franchises obtained, and a start made toward assembling the necessary capital."

The expenses to be incurred during this period were thus described (Resp. Ex. No. 1, p. 18, R. 522a; R. 58a-59a):

"This item includes the cost of perfecting the organization, incorporating the company, obtaining the necessary permits, franchises, and approval of constituted authorities; including salaries of executives and clerks, legal services, traveling and miscellaneous expenditures required prior to the construction period."

Administrative, Legal and Incidental Costs.—These costs are those which are incurred during the construction period. They are in addition to the cost of material and labor entering into the bridge structure, and which cannot be assigned to individual items or classes of property.

They are classed as "Indirect Construction Costs." (Resp. Ex. No. 1, p. 16, R. 521a; R. 62a).

The amounts estimated by the Appellant's engineers for these three items were as follows:

Promotion and preliminary investigation	$10,125
Organization and incorporation	10,125
Administrative, Legal and Incidental	9,930
Total	$30,180

The Commission's engineer in his appraisal included substantially all expense *prior to actual construction,* including "Promotion and Preliminary Organization," and "Organization and Incorporation," in a single item which he called "Promotion and Organization"; and included similar items of expense incurred *During the period of construction,* under "Administrative, Legal and General Expenses" (R. 235a). His estimates were as follows:

Promotion and Organization	$8,000
Administrative, Legal and General Expenses	8,000
Total	$16,000

The Appellant's engineers were not asked upon cross-examination to produce any itemized statement of the costs entering into the three items set out above. The allowances made seemed very reasonable, and, not being challenged on cross-examination no schedule of these costs was presented.

When it appeared, however, from the Commission's appraisal that its engineer, Mr. Curry, had made a sharp reduction in these items, he was carefully cross-examined with respect to them (R. 327a-354a). He then presented the following figures in support of his estimates (R. 327a-330a):

Promotion and Organization, including all Pre-Construction Costs:

Preliminary study of traffic and costs	$1,000
Corporate organization—covering legal expenses, fees, and cost of issuing securities	2,000
Permits, taxes prior to construction, franchises	2,000
Salaries and expenses of promoters and clerical force	1,000
Preliminary consideration of financial matters	1,000
Interest on foregoing items during pre-construction period	500
Miscellaneous expenses	500
	$8,000

Administrative, Legal and General Expenses During Construction:

Compensation of executives	$2,000
Clerical and office expenses	1,000
Incidental corporate expenses	1,000
Taxes during construction	1,000
Insurance during construction	500
Legal fees during construction	2,000
Miscellaneous	500
	$8,000

Many of these items would have to be further broken down in order to demonstrate their unreasonableness. This was done with respect to a few of the items, and the admissions made by Mr. Curry on cross-examination indicate clearly that his estimates are unreasonably low. On page 345a he testified that the total allowance which he had made for the compensation of promoters of the project was $750. His entire allowance for the cost of engineering prior to actual construction work was $1,000. This he admitted was considerably less than such engineering service would be

worth (R. 334a). His entire allowance for legal services during the period of promotion and organization was $200 (R. 344a-345a). He estimated the taxes during construction would amount to $1,000 but on cross-examination he admitted that this item would not be less than $4,102.18 on a basis of twelve months (R. 351a-354a).

As a matter of fact a more reasonable estimate of the amount of taxes during construction would be as follows:

On $500,000 of bonds—4 mills	$2,000.00
On $425,000 of capital stock—5 mills	2,125.00
Local taxes	102.18
Total for 12-month period	$4,227.18

For a sixteen month period of construction these taxes would amount to $5,636.24.

In its Report, referring to these costs, the Commission said (R. 25a-26a):

> "Obviously, opinion evidence based on experience gained under conditions involved in the development of such enterprises must be clearly shown to be applicable to the fundamentally different condition faced by the Clark's Ferry Bridge Company. The Commission is of the opinion that the intangible costs of this Company should be based on the particular condition which it would have to meet and that the evidence of its witnesses does not indicate that its conclusions are so founded."

While Mr. White and Mr. Johnson are not local engineers, they made a very careful study of local conditions and of the problems that would be met in a reproduction of the Appellant's bridge; and we believe there is no one more familiar with the bridge and its problems than Mr. Masters. We think the testimony utterly fails to support the suggestion of the Commission that these engineers were

not familiar with the conditions facing the Appellant. As a matter of fact, it does not show that there was any "fundamentally different condition faced by the Clark's Ferry Bridge Company." And we submit, in all candor, that few engineers could be called to the stand who would exhibit less knowledge of and familiarity with the intangible and indirect costs of construction than did the Commission's engineer.

Interest During Construction.

The estimates of this cost were:

Appellant.	Commission.	Difference.
$38,145	$22,000	$16,145

The difference between the allowances made for interest during construction is accounted for by the fact that—(1) the engineers assumed different periods for the reconstruction of the bridge, (2) they computed interest at different rates, and (3) of course, since the amounts of their respective appraisals were different, the amount of money on which interest during construction had to be paid differed. The third cause for difference is inherent in the fact that the appraisals differ in amount, and needs no further comment.

The Appellant's engineers assumed a construction period of sixteen months (R. 59a, 62a, 125a-126a), while Mr. Curry assumed a period of twelve months (R. 236a, 296a).

The contract between the Appellant and Vang Construction Company for the construction of Appellant's bridge was executed June 10, 1924, and called for completion on Oct. 1, 1925, a period of fifteen and two-thirds months. In addition the contractor had one month to prepare between the award of the contract and June 10, 1924 (R. 277a-278a). By reason of the fact that the contractor employed an un-

usual number of men and an unusual amount of plant, it was able to complete the bridge within twelve months (R. 152a-154a). And because of this fact the Appellant was required under its contract to pay them a bonus of $20,050.

Mr. Curry, the Commission's engineer, who, so far as the record discloses, never designed or built a bridge in his life and was never employed on a bridge construction job, says very confidently that this bridge could easily be built in a period of twelve months, and that the plant and equipment which the contractor used was no more than would ordinarily be used (R. 318a-321a). But we submit that this inexperienced judgment cannot be accepted in the face of the testimony of Mr. Masters (R. 152a-154a).

Mr. Masters has been engaged for many years in designing and constructing bridges. If he had thought twelve months a reasonable time for construction he would never have asked for bids for construction in a sixteen-month period and provided a bonus for earlier completion. It just happened that the contractor at the time had a great deal of equipment idle (R. 153a) and by reason of its use was able to finish ahead of the scheduled time. On this point the testimony of Mr. Masters is clear and positive (R. 154a):

> "Q. Mr. Masters, did he (the contractor) employ in this work an unusual amount of equipment?
>
> "A. He did. He had three of the very finest type locomotive cranes on that job all over in the river there, and he built himself a double track railway trestle across the river. All the other contractors in figuring on the job figured it would take them the full length of time and maybe a little more. Of course they were going to employ much less equipment. He put upwards of $200,000 of equipment on the job and jeopardized a great deal of it in the river just to do a half-million contract."

Even Mr. Curry himself admitted (R. 372a-373a) that he did not contemplate in his reproduction estimate the construction of a trestle across the river "in as expensive, or in the same manner as it was originally done, and as I know it was done when the bridge was built." But he forgets all about this when he comes to consider the time necessary to reconstruct the bridge.

The Appellant's engineers assumed that the appellant in reproducing its property would have to pay interest during construction at the rate of 8 per cent (R. 62a, 125a). Mr. Curry allowed only 6 per cent because that was the "legal" rate (R. 301a-308a). Here again Mr. Curry was expressing an opinion upon a matter in which he had had no experience and had made no investigation. He admitted on cross-examination that in using 6 per cent he was influenced by the fact that the Appellant company, after its business had proven a commercial success, and it was in possession of a valuable income-producing property, had been able to refund its first mortgage at 6 per cent (R. 308a-309a). But these are not reproduction conditions. If the property were being reproduced new, there would be no successful financial history to reduce the interest rates. Futhermore, he ignored the fact that the refinancing done by the Appellant included only the first mortgage money, and did not include the equity money which would demand and receive a higher rate.

Mr. Curry admitted (R. 309a) that he did not know of "any other toll bridge in the United States that in the year 1930 obtained money at the rate of 6 per cent," or for as little as 8 per cent. Mr. White testified (R. 125a): "I used 8 per cent as being the minimum return that an enterprise of this kind would demand to attract money to this project." And Mr. Masters, who has been familiar with the financing of numerous toll bridges throughout the

country, testified that in 1929 and 1930 it was almost impossible for bridge companies to raise money at any rate of interest whatever (R. 172a).

Under this testimony, we submit that there is no justification for assuming a rate of interest during construction of less than 8 per cent.

The Commission, in commenting on this item of cost, said (R. 26a):

> "The company's engineer has used an interest rate of 8% although there is no evidence of such a cost. The Commission's engineer assumed that money could be had for such periods at 6%."

From this comment it would appear that any assumption which Appellant's engineers made had to be supported by clear and indubitable evidence, but any assumption which the Commission's engineer made was accepted without proof. But even in the face of this attitude we submit that the evidence of Mr. White and Mr. Masters is conclusive that money would have cost the company at least 8 per cent.

It should be noted also in this connection that Mr. Curry allowed no interest during construction upon the cost of financing. He said (R. 296a): "They were entitled to interest during construction on every item in my valuation preceding interest during construction." Reference to his appraisal (Comp. Ex. No. 3, R. 465a) shows that Cost of Financing follows Interest during Construction, and accordingly no interest was allowed upon it. He finally admitted, after extended cross-examination (R. 313a-318a), that the cost of financing was an item of cost which would have to be incurred before or at the beginning of the construction period and the company would have to pay interest upon it.

After making this admission he then declared that he had already allowed for such interest in the item of cost of

financing itself (R. 318a). We then asked him to submit an itemized statement showing how he computed his Cost of Financing. In response to this request he later submitted an itemized statement, but an examination of that exhibit shows that he did not make any allowance for interest during construction therein (Comp. Ex. No. 12, R. 473a).

Cost of Financing.

The estimates of this cost were:

Appellant	Commission	Difference
$58,090	$37,500	$20,950

The cost of financing, as estimated by the Appellant's engineers, amounts to approximately 6½ per cent of the capital to be raised. The nature of the items embraced in this unit of cost is explained on page 18 of Respondent's Exhibit No. 1 (R. 522a) and in the testimony of Mr. White (R. 123a-125a). Mr. Curry based his estimate upon the finding which the Commission had made in the previous case and made no independent investigation (R. 318a). When asked for an itemized statement in support of his estimate he presented Complainant's Exhibit No. 12 (R. 473a). Several features of this exhibit are interesting.

First it will be noted that in Complainant's Exhibit No. 3 (R. 465a), Mr. Curry has allowed $37,500 for the cost of financing, while in his Exhibit No. 12, which he furnished to support his estimate, he has allowed only $35,000. Exhibit No. 12 was furnished subsequent to the last hearing and we had no opportunity to ask him what accounted for the difference of $2,500 in his estimates.

Next it will be noted that he has allowed an item of $650 for bonus on capital stock. Presumably this was computed upon the amount of capital stock of the Appellant actually

outstanding at the time of his appraisal, which was $250,000 common stock and $175,000 preferred stock. The bonus on this stock, however, would amount to 1/5 of 1 per cent of $425,000, which is $850 instead of $650. A reading of the cross-examination of Mr. Curry on this subject (R. 339a-341a) leads to the conclusion that up to that time he had no definite idea of what bonus on capital stock was, and did not know how to compute it.

With respect to the item of printing it may be noted that at page 335a of the Record Mr. Curry insisted that the printing of the bonds, stocks and mortgage would not cost more than $500. In his Exhibit No. 12 he allows $800 for this item.

Again, in computing brokerage commissions and other sales expenses on $625,000 of preferred stock and bonds, Mr. Curry has used a rate of 4½ per cent, amounting to $28,500. There is no testimony in the record and Mr. Curry furnished no evidence to support this assumed rate. The uncontradicted testimony in the record is that the brokerage actually paid in 1924 was 7 per cent and the Commission in the former case so found (R. 493a). It appears that both in his appraisal and in his testimony Mr. Curry showed a complete ignorance of the problem and the costs involved in financing. It is true he has made his estimate in this case to correspond fairly well with the cost of financing which the Commission allowed in the former case. But in this case neither he nor the Commission has allowed for the amortization of bond discount which was provided for in the former decision (R. 493a-494a). Such allowance was made by the Superior Court, however (R. 847).

Mr. Masters testified (R. 171a-172a), as we have already stated, that the allowance of $58,090 made by the appellant's engineers for the cost of financing was a very rea-

sonable one; that in 1929 and 1930 it was practically impossible to finance a privately owned toll bridge because the rates were prohibitive (R. 161a, 172a), and that the financing of the Tacony-Palmyra bridge cost 10 per cent (R. 172a). Upon this record, therefore, we find no justification for reducing the allowance made by the appellant's engineers.

As we have stated the Superior Court based its estimate of intangibles upon the costs actually incurred by the company in 1924. This basis we have shown to be unreliable in this case. But if it be used it should be consistently used, and there should be included in the cost of financing the sum of $10,000 in preferred stock which was issued to the holders of the mortgage bonds on the old bridge property. The facts respecting this stock are these: On December 31, 1923, the appellant had outstanding $50,000 in bonds, secured by a first mortgage. All of them were held by the four incorporators of the company. In order to finance the construction of the new bridge it was necessary to issue $450,000 of bonds and $175,000 of preferred stock, and in order that these bonds might be sold, it was necessary to retire the $50,000 of bonds in the hands of the stockholders. They surrendered their bonds in exchange for $60,000 of preferred stock, and it is this difference of $10,000 actually expended which the Superior Court has ignored.

The holders of the original bonds, no matter who they chance to be, had the right to hold their bonds until maturity. They were not required to sell. If they had held them the company would have been required to issue a larger amount of new bonds to create a reserve in order to meet these at maturity. This would have increased the brokerage and discount on the new bonds and imposed upon the public a greater charge on that account. The holders

of the old bonds voluntarily surrendered a first lien under a mortgage upon a valuable income producing property, and accepted $60,000 out of an issue of $175,000 of preferred stock which was junior to $450,000 of bonds. The preferred stock carried no guarantee of dividends and was secured by no lien on the property. Its dividend rate was 7 per cent.

There can be no doubt from a comparison of these issues that the old bonds were better secured and more valuable than the preferred stock, and the holders were entitled, if they chose to make the exchange, to a reasonable consideration for so doing. The fact that they were the stockholders did not impose upon them an obligation to make the exchange without consideration.

The Commission in its report in the prior case refused to allow any part of this $10,000 because $115,000 of the preferred stock had been sold at par (R. 494a). This reasoning will not bear scrutiny. If the sale of some preferred stock at par proves that no expense need be incurred in disposing of the preferred stock, then it seems clear that no expense should have been incurred in selling the bonds for they were a prior lien on the property and the earnings. Yet the Commission and the Superior Court have both made substantial allowance for the cost of selling the bonds.

Interest on Intangibles.

The appellant's engineers properly allowed $3,980 interest upon the intangible costs of Promotion and Preliminary Investigation, Organization and Incorporation, and Cost of Financing. These are all items of cost which must be incurred at and before the beginning of the period of construction, and the capital of the company necessary to defray these costs is invested throughout the construction period. The company is therefore entitled to interest upon

these items. Mr. Curry made no allowance for such interest excepting the single allowance of $500 interest which he included in his item of Promotion and Organization. That item of $500 was obviously an allowance of interest on the single item of $8,000, promotion and organization, during his assumed construction period of twelve months. He made no allowance for interest during the preconstruction period and no allowance for interest upon the cost of financing, although, as we pointed out above, he admitted that the money invested in the cost of financing would have to be invested throughout the construction period (R. 317a).

6. Special Value of Location.

In addition to the values hereinbefore discussed, there is an element of value inherent in the location of the appellant's real estate and improvements, which the engineers have estimated at $100,000. We have called it "Value of Location." It would be more accurate to say that it is the special value which the company's real estate has for the special purpose for which it is used.

The appellant's engineers, discussing this element of value, in their appraisal report said (Resp. Ex. No. 1, p. 21, R. 525a):

> "Over and above the values set forth in prior sections of this report, there exists an additional element of value which cannot be reflected in an estimate of actual cost. This additional value is inherent in this location as a bridge site, due to its special advantages for this purpose.
>
> "Chief among these advantages is that a bridge crossing at any other point on the river for many miles in either direction, would probably cost $150,000.00 to $200,000.00 more than at this particular point where the river is narrower than elsewhere, the river bed conditions favorable, and neither bank occupied by railroad rights of way. The topography of the coun-

try is such as to make this a logical crossing point, as evidenced by the reference in the legislative Act of 1824 to the turnpike road crossing the river near Clark's Ferry.

"These conditions no doubt account for the fact that the Clark's Ferry bridge is the only highway bridge across the Susquehanna River between Harrisburg and Sunbury.

"Therefore, the natural advantages of these bridgehead rights have a property value that would be considered in transfer or free barter. These rights would be recognized by a common carrier if seeking such a location for the construction of a bridge.

"Consequently, in our opinion such value should be recognized in determining a rate base for establishing fair tolls in the amount of at least $100,000.00."

Mr. White, in his testimony concerning this value, said (R. 65a):

"Q. Now, what other element of value, if any, has your study developed in connection with this bridge?

"A. An investigation of the conditions, part of which is from other engineering reports that we have studied and partly from the published reports of the Government, indicates that this point is shorter than any other point along the river in this immediate vicinity, that there is better foundation at this point, and that to construct a bridge at any other point except this would entail an expenditure in excess of the expenditure on the construction of this bridge of somewhere between one hundred and fifty to two hundred thousand dollars. So we believe that this bridge site has an advantage over other bridge sites and has a value that a carrier if looking for a site to cross this river, would be willing to actually pay money for, in preference to other sites in this vicinity, and we have estimated that at $100.000.00.

"These are not costs of reproduction, but they are other elements of value that we believe should be recognized in fixing the value of the Clark's Ferry Bridge."

His judgment in this matter is corroborated by that of Mr. Masters (R. 660a-661a; 695a). In referring to this element of value in the former case Mr. Masters said (R. 661a):

> "Q. Now included in respondent's exhibit No. 6 is an item of value of location, $100,000.
> "A. Yes, sir. That seems reasonable.
> "Q. That represents what?
> "A. That represents the value of the site.
> "Q. For bridge purposes?
> "A. For bridge purposes."

The appellant contends that it is entitled to have included in its rate base, and to earn a fair return upon, this special value which its real estate has by reason of its adaptability for bridge purposes. It is not the value of its franchise which is claimed, but the special value inherent in the land which would make it more desirable and more valuable to others who might desire to purchase it for highway or railroad bridge purposes, and for which such others would be obliged to pay if they acquired it by condemnation.

Although the measure of fair value for rate-making purposes may not in all cases correspond to the measure of just compensation where private property is condemned, we think it is clear that where there is a special value inherent in private property which cannot be taken by eminent domain without just compensation, the use of that property value cannot be taken by the public without just compensation by a refusal to allow a return upon it when it is devoted to public use. As was said by Judge Morrow, in *Spring Valley Water Works* v. *City and County of San Francisco*, 124 Fed. 574, 594, "It is not perceived that there is any difference in the principles applicable to the two cases."

We believe, therefore, that the claim of the appellant for addition of this special value to the rate base is supported by the numerous decisions in condemnation cases, in which it is held that the owner must be compensated for such value.

In *Boom Company* v. *Patterson,* 98 U. S. 403, the defendant owned the greater part of three islands in the Mississippi River above the Falls of St. Anthony, which were so situated with reference to the west shore of the river as to be admirably adapted for boom purposes. In a proceeding to condemn these islands by a boom company the jury found a general verdict for $9,358.33 and also found specially that the value of the land taken, aside from any consideration of its value for boom purposes, was $300, and, in view of its adaptability for those purposes, was worth the further sum of $9,058.33. This Court sustained the general verdict, and, in the course of its opinion, said (pp. 407-408):

> "Upon the question litigated in the court below, the compensation which the owner of the land condemned was entitled to receive, and the principle upon which the compensation should be estimated, there is less difficulty. In determining the value of land appropriated for public purposes, the same considerations are to be regarded as in a sale of property between private parties. The inquiry in such cases must be what is the property worth in the market, viewed not merely with reference to the uses to which it is at the time applied, but with reference to the uses to which it is plainly adapted; that is to say, what is it worth from its availability for valuable uses. Property is not to be deemed worthless because the owner allows it to go to waste, or to be regarded as valueless because he is unable to put it to any use. Others may be able to use it, and make it subserve the necessities or conveniences of life. Its capability of being made thus available gives it a market value which can be readily estimated.

> "So many and varied are the circumstances to be taken into account in determining the value of property condemned for public purposes, that it is perhaps impossible to formulate a rule to govern its appraisement in all cases. Exceptional circumstances will modify the most carefully guarded rule; but, as a general thing, we should say that the compensation to the owner is to be estimated by reference to the uses for which the property is suitable, having regard to the existing business or wants of the community, or such as may be reasonably expected in the immediate future.
>
> "The position of the three islands in the Mississippi fitting them to form, in connection with the west bank of the river, a boom of immense dimensions, capable of holding in safety over twenty millions of feet of logs, added largely to the value of the lands. The boom company would greatly prefer them to more valuable agricultural lands, or to lands situated elsewhere on the river; as, by utilizing them in the manner proposed, they would save heavy expenditures of money in constructing a boom of equal capacity. Their adaptability for boom purposes was a circumstance, therefore, which the owner had a right to insist upon as an element in estimating the value of his lands."

In *Mitchell* v. *United States*, 267 U. S. 341, 344, this Court said:

> "The special value of land due to its adaptability for use in a particular business is an element which the owner of land is entitled, under the Fifth Amendment, to have considered in determining the amount to be paid as the just compensation upon a taking by eminent domain."

The same conclusion was reached in the following cases: *Young* v. *Harrison*, 17 Ga. 30, 36-38, where the land had a special value for bridge purposes.

Little Rock & Ft. Smith Ry. v. *McGehee,* 41 Ark. 202, 205-209, where the land had a special value as a site for a ferry.

Little Rock Junction Ry. v. *Woodruff,* 49 Ark. 381, 5 S. W. 792, 795, where the land had a special value as a bridge site.

Calumet R. Rg. v. *Moore,* 124 Ill. 329, 15 N. E. 764, 766, where the land had a special value for dock purposes.

Fales v. *Easthampton,* 162 Mass. 422, 38 N. E. 764, 766, where the land had a special value for a mill site.

The principle is settled also in the law of Pennsylvania. In *North Shore R. R. Co.* v. *Pennsylvania Co.,* 251 Pa. 445, 449, the Supreme Court of Pennsylvania, quoting with approval from 15 *Cyc.* 757, said:

> "The true rule is that any use for which the property is capable may be considered, and if the land has an adaptability for the purposes for which it is taken, the owner may have this considered in the estimate as well as any other use for which it is capable. Thus, in proceedings to condemn land for railroad purposes, for a bridge site, or for a reservoir or water-supply, it may be shown that the land has an especial availability which would render it valuable to any one who might wish to purchase it for railroad purposes, for a bridge site, or for the purpose of a reservoir or water-supply, and the owner may insist upon this availability of his land for the particular purpose as an element in estimating its value."

The same principle is declared in:

Wadsworth v. *Manufacturer's Water Co.,* 256 Pa. 106, 112.

Marine Coal Co. v. *Pgh., M. & Y. R. R. Co.,* 246 Pa. 478, 485-486.

Brown v. *Forest Water Co.,* 213 Pa. 440, 441.

Cox v. *Phila. H. & P. R. R. Co.,* 215 Pa. 506, 510.

That the land owned by the appellant and used as a bridge site has a very substantial value for that special use, over and above its value for other purposes, is neither contradicted by any evidence in the record nor disputed by the Commission or the Superior Court. And there is no evidence to show that the estimate of value placed upon it is excessive or unreasonable. Under the uncontradicted evidence the land has a spcial value for bridge purposes of approximately $100,000. Both the Commission and the Superior Court refused to consider it, or to make any allowance whatever for it.

The reasons assigned for refusing to include this special value in the rate base were "that the capitalization of such an item would, in essence, be demanding a return from the public for the use of a right inherent in the nature of the public's own property. The privilege to cross the river, irrespective of the site or location, is obtained from the body politic" (R. 498a); that the appellant is not entitled to any premiums because it exercised good judgment in selecting its site (R. 498a); that, after all, it was not the *entrepreneurs* of the present enterprise who selected the site (R. 27a); that the appellant merely took advantage of "traffic customs which the Commonwealth, through its system of highways and otherwise, has created" (R. 27a); and that the allowance of this value would, in effect, be capitalizing a franchise (R. 842).

These reasons not only ignore the settled law, but also misconstrue the legal contention of the appellant.

The cases which we have cited above considered all of these reasons and held that none of them justified the taking of private property for public use without paying to the owner the special value inherent in the property for a special use, though that value was a mere incident of strategic location or the gift of nature, and even though a pub-

lic franchise would have to be acquired before that value could be realized.

The appellant has never based its claim upon any alleged exercise of superior judgment. It contends simply that it is the owner of land on either side of the river which has a special value for a special use, and that the Commonwealth cannot take that property without just compensation, by refusing the right to earn a fair return upon that special value.

Accrued Depreciation.

Estimated by Commission	$41,403
Estimated by Appellant	16,282
Difference	$25,121

No finding made by the Commission, or the Superior Court.

James W. White and Paul B. Johnson, engineers for the Appellant, estimated the amount of accrued depreciation to the date of their appraisal to be $16,282, and deducted that amount from the reproduction cost new, in arriving at their estimates of fair present value (R. 511a, 60a). The estimate was based upon an actual inspection of the bridge property and an appraisal of the extent to which deterioration had actually proceeded.

Mr. White testified (R. 60a-61a):

> "Q. Now how did you arrive at the item of $16,282 which you deducted for depreciation?
>
> "A. The inspection of the bridge reflected that there was very little visible deterioration in the bridge; there were a few cracks in the vicinity of the toll house, but in the main, the bridge was in very good physical condition, and the $16,000 we deducted there is the amount we considered would be a re sonable amount to discount the bridge because of existing deterioration in the bridge.

"Q. It was based, then, upon an actual observation?

"A. Actual observation of the condition of the bridge at the time of appraisal.

"Q. And not based upon the expiration of its assumed life?

"A. It is not based on any life theory or expiration of life of the bridge."

From this inspection, which he further described on cross-examination (R. 117a-121a), he concluded that the actual depreciation suffered by the bridge to the date of the appraisal was approximately 2 per cent of the value of its depreciable elements, and deducted that amount. He did not consider the age of the bridge at the date of his appraisal (Built May 30, 1925, Appraised Sept. 1, 1929, Age 4⅓ years), or the amount of the annual depreciation charge, or the depreciation reserve, as being material or controlling in determining the extent to which deterioration had actually proceeded. His view that there was no direct relation between the extent of accrued depreciation and the amount of the annual depreciation allowance or the depreciation reserve, was corroborated by Nathan B. Jacobs, who testified (R. 146a):

"I think accrued depreciation is a matter of determining by inspection and examination; annual depreciation is a matter of accounting."

The Commission's engineer, Lynn B. Curry, arrived at his conclusions by a totally different method. He made an inspection of the bridge, and testified (R. 237a):

"A. Well, as to the physical condition of the bridge, *the bridge is in general what I would call a fair and about normal condition.* However, I noticed just what might be expected in a reinforced concrete structure, the cracks, and the reinforced steel in some instances were being affected by corrosion and oxidation to the

extent that it showed through in the surface by the color of iron oxide. In a very few instances there are points where you could see the steel. By all this I don't mean that the bridge is in bad condition, but *it is evidence of what may be expected from this type of structure,* which is reinforced concrete, for bridge work, and *it leads me to the conclusion that that bridge is not particularly different from what the general expectation would be for concrete bridges, and it is my judgment in the consideration of this bridge at the present time that its expectancy might be* 40 *to* 50 *years. I have chosen for the purpose of this reproduction cost computation a life expectancy of* 45 *years.*"

He then made reference to the possibility of obsolescence and the hazards to which the bridge property was subject, and continued (R. 238a-239a):

"* * * I concluded that a fair and reasonable presumption might be 45 years.

"Q. And as a result of your study you have consequently determined the accrued depreciation to be what?

"A. $41,403, arrived at on the 4 per cent sinking fund method, as shown on the sheet, as of the date of May 30, 1931, which is the end of the sixth year of its life.

"Q. And in your opinion does the figure which results from the application of the sinking fund method on the 4 per cent basis appear to be a reasonable figure in the light of your study of the bridge structure and the history of the bridge?

"A. It does."

On cross-examination this witness testified (R. 386a):

"Q. The accrued depreciation, which you estimated in your appraisal, amounting to $41,403, is a mathematical computation based on a certain sinking fund method, is it not?

"A. That is exactly what it is in amount.

"Q. Can you tell us whether or not it would require $41,400 now to restore the bridge to 100 per cent condition?

"A. I made no study of that matter.

"Q. In the life of this structure, is it not true that actual depreciation is much less in the early years of the life of the structure than in the later years?

"A. I think that might be said to be generally true."

It is quite obvious from this testimony that the Commission's engineer made an inspection of the bridge only to determine whether the depreciation which had accrued was about the average and normal amount which you would expect to find in a bridge of this kind and age; or whether it was notably greater or less. From his findings upon this point he would form a conclusion as to the probable useful life of the bridge. And from this conclusion, by rule of thumb, he would arrive at the extent of accrued depreciation. It is evident that he did not attempt to determine the amount or extent of *actual* depreciation, as distinguished from *theoretical* depreciation.

Having found that the extent of actual depreciation was normal for a bridge of this age and type, he concluded that its probable useful life was 45 years. He then indulged the assumption (contrary to fact) that actual depreciation occurs at an even and uniform rate throughout the life of the property, although he expressly admitted that "actual depreciation is much less in the early years of the life of the structure than in the later years". (R. 386a). In accordance with his assumption he applied the 4 per cent sinking fund method, and took, as the amount of his accrued depreciation, the amount of the depreciation reserve which would have been built up in accordance with that method at the end of six years, based upon his estimate of reproduction cost new.

Counsel for the Commission on redirect examination sought to bolster up this testimony and have it appear that the estimate of the witness was an estimate of actual depreciation. But the witness merely confirmed the conclusions we have stated above, when he said (R. 404a):

> "The basis behind the rule is the application of the proper elements in the computation, *which leads to a determination of the life expectancy.*"

The all-important factors in Mr. Curry's estimate were the life and the age of the structure, and his estimate was an estimate of *theoretical* depreciation, not *actual* depreciation.

It is now fairly well settled by the decisions of this Court, and those of other courts which it has approved, that the proper method of determining the amount of accrued depreciation is by estimate of the actual depreciation observed by inspection, and not by the application of mathematical computations based upon the age and life of the property. It is *actual,* not *theoretical* depreciation.

In the *Indianapolis Water Case* (*McCardle* v. *Indianapolis Water Co.*, 272 U. S. 400), Mr. Justice Butler said (p. 416):

> "* * * There is deducted approximately 25 per cent of estimated cost new to cover accrued depreciation. The deduction was not based on an inspection of the property. It was the result of a 'straight line' calculation based on age and the estimated or assumed useful life of perishable elements. The commission's report indicates that the property is well-planned, well-maintained and efficient. Its chief engineer inspected it, and estimated its condition by giving effect to results of the examination and to the age of the property. He deducted about six per cent to cover depreciation. Mr. Hagenah made an estimate of existing depreciation based on actual inspection and a considera-

tion of the probable future life as indicated by the conditions found. He deducted less than six per cent. Mr. Elmes testified that he made an inspection and estimate of all the actual depreciation. He estimated $443,044 would be required to restore the property as of appraisal date to its condition when first installed and put in practical operation. He deducted that amount. The testimony of competent valuation engineers who examined the property and made estimates in respect of its condition is to be preferred to mere calculations based on averages and assumed probabilities. The deduction made in the city's estimate cannot be approved. *Pacific Gas Co.* vs. *San Francisco,* 265 U. S. 403, 406; *Standard Oil Co.* vs. *So. Pacific Co., supra,* 159; *Landon* vs. *Court of Industrial Relations,* 269 Fed. 433, 445; *City of Winona* vs. *Wisconsin-Minnesota Light & P. Co.,* 276 Fed. 996, 1004; *New York Telephone Co.* vs. *Prendergast,* 300 Fed. 822, 826; *Southern Bell Tel. & Tel. Co.* vs. *Railroad Commission,* 5 F. (2d) 77, 95."

In the light of these authorities we submit that the method adopted by the appellant's engineers in the present case is the correct one; and that followed by the Commission's engineers is not.

The Commission made no finding whatever as to the amount of accrued depreciation but did refer to it in its Report (R. 27a-29a). And in so doing the Commission sought to minimize the force of the testimony of appellant's engineers by inferring that their inspection had not been careful. It said (R. 28a):

"It appears that this witness's inspection of the property did not cause him to see any crack in the structure of sufficient size to expose the reinforcing steel within although the Commission's engineer did so."

Their own engineer said (R. 237a):

> "In a very few instances there are points where you could see the steel."

There is no other testimony that steel was visible. When we consider that the bridge is 2,075 feet long, with fourteen piers and fifteen spans, and that the two engineers examined the bridge at different times (White in 1929 and Curry in 1930), and perhaps at times when the stages of the water were different, the fact that the appellant's engineer did not see the "very few instances" which the Commission's engineer saw a year later is no reflection upon the care or skill with which the former made his inspection.

In further support of its engineer's theoretical estimate the Commission said in its Report (R. 28a-29a):

> "* * * the company produced evidence from which the conclusion is inescapable that the bridge structure has already incurred chemical changes in its composition and an oxidation of its steel parts as a result of which it can never be put back into the condition of a new structure and has already sustained substantial deterioration the effects of which have not yet been felt."

It is quite true that the appellant's engineers testified at length respecting the causes and evidences of depreciation in concrete structures. And one of them, Mr. Jacobs, said (R. 141a):

> "The general cause of depreciation of reinforced concrete is the action of water on the reinforcing steel, corrosion of steel set up and stress, or a chemical corrosion which seems to eat the concrete away which is covering the steel, and you can notice it if you will inspect this bridge carefully. You will notice if you were just even to drive across slowly, you will see brown spots forming on the bridge, and those brown spots are

evidence of corrosion of the steel. That is iron oxide, the brown spots, where that takes place and that action will tend to erode or wear away the concrete. That is the principal cause of depreciation."

Neither the appellant, nor its engineers, contend that the bridge has not suffered some deterioration. It has. But all of the testimony, including that of the Commission's engineer (R. 237a, 386a), shows that the actual depreciation at the time of this appraisal was slight; and we submit that the estimate of the appellant's engineers as to the extent of this deterioration is a fair and reasonable one.

II.

The limitation placed by the Commission and the court upon the gross revenue of the appellant results in a taking of its property without due process of law.

The order of the Public Service Commission and the judgment of the Superior Court fixed the annual allowance for depreciation at 1 per cent of the fair value of the property, and the rate of return at 7 per cent.

The appellant contends that the allowance for annual depreciation should be fixed at 2½ per cent of the value of the depreciable property, on the straight-line basis, that the rate of return should be 9 per cent, and that the judgment of the Superior Court, in these respects, is confiscatory.

A.

The Allowance for Annual Depreciation Was Inadequate.

Annual depreciation claimed by appellant.....	2½% x $844,512 =	$21,112
Annual depreciation allowed was.....	1% x $767,800 =	7,678
Difference		$13,434

The value of the depreciable property upon the basis of which annual depreciation should be computed is arrived at by the appellant in the following manner:

Reproduction cost new (appellant's appraisal)		$891,926
Deduct non-depreciable property:		
Promotion and preliminary investigation	$10,125	
Organization and incorporation	10,125	
Real Estate	11,350	
Clearing Site	8,547	
Deduct allowance on reinforcing steel, Item 17	3,347	
And reductions in value not contested here:		
Coffer dams	1,681	
Office building	2,239	
		47,414
Total Value of Depreciable Property		$844,512

The estimates of the engineers as to the probable useful life of the bridge were not far apart. Mr. Masters estimated the fair average life of a concrete bridge to be from 30 to 50 years (R. 154a). Mr. Jacobs estimated the useful life to be 40 years (R. 138a). The Commission's own engineer, after careful consideration, estimated its life at 45 years (R. 237a-238a, 405a). The remarks of Mr. Jacobs and Mr. White, referred to by the Superior Court (R. 844) as indicating longer periods, were not intended to be deliberate judgments as to the useful life of the bridge, as reference to their testimony will readily show (R. 138a and 120a).

Upon the evidence the assumed life of 40 years, which the appellant's engineers used in computing annual depreciation, was fully justified.

The only evidence offered either in the former case or in this, relating to the rate of depreciation, was that it should be 2 per cent or 2½ per cent. Mr. Masters, the experienced bridge engineer who designed and built this bridge, testified in the former case that the generally accepted rate of annual depreciation for concrete bridge structures was 2 per cent; that that was the rate employed by the Pennsylvania State Highway Department on the

straight line basis, and that it was based upon an assumed life of 50 years (R. 686a-689a). The complainants in that case offered no evidence on the subject.

In the present case Mr. Nathan B. Jacobs, an experienced and capable engineer, was employed to make an examination and study of the property in order that he might recommend what annual allowances should be made for depreciation and maintenance. He testified that an annual allowance of 2½ per cent of the depreciable property should be allowed upon the straight line basis. The bases of his conclusion are set forth in the record (R. 135a-140a). His opinion that depreciation should be computed on the straight line basis was confirmed by Mr. Masters (R. 160a). The Commission offered no evidence at all respecting the annual depreciation allowance. Its engineer repeatedly declared that he had made no such study and would not express an opinion (R. 389a, 405a).

The reasons assigned for adopting the straight line basis, as stated by Mr. Jacobs, were:

(1) It is the simplest method, and does not require the building up of any theoretical or actual sinking fund, or reserve; (2) there is no opportunity in a utility of this character for the investment of the depreciation reserve in the plant, as is contemplated by the sinking fund method; (3) the sinking fund method contemplates a constant increase in the amount of the charge made annually against the earnings of the company, which increase can well be borne by a water, electric or gas company in a growing community where there is a constant increase in the plant and business but cannot well be borne by a utility whose earnings in the later years of its life may be materially reduced by competition; and (4) this property is a transportation utility, and the history of transportation indicates that earnings decrease as competitive means of transportation are developed (R. 135a-138a).

The Commission stated its conclusion as to the proper allowance to be made for annual depreciation in the following language (R. 31a-32a):

> "In conformity with the principles stated in dealing with accrued depreciation and its finding of fair value, the Commission will not allow the amount claimed for annual depreciation but will continue the amount named in the previous decision, namely, $7,678."

The only mention of annual depreciation in the Report of the commission in the former case, was (R., 504a):

> "Respondent claims an annual allowance of $20,152.86 for depreciation, which amount is based upon an estimated life of fifty years, or 2% annual depreciation on $1,007,643.17. Giving due consideration to the estimated life of the depreciable property included in the foregoing finding of fair value, the Commission is of the opinion that $7,678 is an ample allowance for annual depreciation."

Although there was no discussion of the matter in either report of the Commission, it was obvious, from the figures, that it had arrived at its annual depreciation allowance by taking 1 per cent of the rate base, of $767,800, or $7,678.

This impression was confirmed by the statements of counsel for the Commission in the brief filed in the Superior Court in the 1925 case (No. 17, March Term, 1927, Brief for Public Service Commission, page 19):

> "The Commission allowed $7,678, which is equal to 1% of the fair value of the bridge as found by it."

And again at page 21:

> "The Commission made an allowance of one per cent of the value of the new structure for depreciation. This was intended to cover depreciation and obsolescence."

Nor is there anything in either report of the Commission to show upon what theory it arrived at 1 per cent as the correct rate. But again it is obvious that the Commission used

the straight line method and assumed a useful life of 100 years. The straight line method was generally used by the Pennsylvania Commission at that time (*Blanning on "Public Utility Regulation in Pennsylvania"*—1924).

But there was no evidence, either in the former case or in this, to support an assumed life of 100 years for this structure, or to support an annual depreciation allowance of 1 per cent.

When this fact was urged upon the Superior Court in this case, the Court sought to justify the allowance by pointing out that the annual allowance of $7,678 "with 4 per cent simple interest will in fifty years produce approximately $767,800, sufficient to rebuild the bridge as now valued," and that "The straight line method advocated by the company will in fifty years with 4 per cent simple interest produce a fund twice as great as that necessary to replace the bridge" (R. 845). In short, the Superior Court found the amount of the allowance was insufficient on the straight line basis, but sustained it on the sinking fund basis.

We are mindful of the fact that in *Georgia Ry.* v. *R. R. Comm.*, 262 U. S. 625-633, this Court said that the amount of annual depreciation to be allowed is a question of fact and the determination of the court below will not be disturbed by this Court unless it be clearly erroneous.

We believe that the record here presents a different case. If the amount of the annual allowance for depreciation be deemed to be a pure question of fact to be determined solely from the evidence, then the judgment of the Superior Court would have to be reversed for there is no evidence to support either an assumed life of 100 years or a depreciation rate of less than 2 per cent.

But the Superior Court did not treat it as a question of fact. It assumed that the public was entitled to the interest accruing from year to year on the depreciation reserve, and concluded that the allowance of $7,678 was suffi-

cient because, when the interest was added, the accumulated total in the depreciation reserve at the end of fifty years would equal the fair value of the property. Whether the public or the appellant is entitled to interest on the money paid annually into the depreciation reserve, is a question of law; and if it has been erroneously decided by the Superior Court, and results in confiscation of the appellant's property, this Court should correct it.

In *Whitten and Wilcox on "Valuation of Public Service Corporations"* (1928), in Chapter 33 (pp. 1817-1874), the authors discuss at some length the annuity, sinking fund and straight-line methods of determining the annual depreciation allowance. They point out that as early as 1923 the depreciation section of the Interstate Commerce Commission on the subject of depreciation charges for telephone companies published a report in which it analyzed carefully these several methods, and recommended adoption of the straight-line method (*Id.* 1824-1829). Concluding its discussion of this method the depreciation section said (*Id.* 1829):

> "In contrast to the methods which involve interest consideration the straight-line method is clear cut, practicable, and simple in its application. Under its provisions operating expenses may be charged with the accrued loss representing consumption of property in operation or with the accrued depreciation, representing the loss of service value in equal annual installments. No questionable accounting is involved and no restrictions are placed upon the use of the carrier's funds.
>
> "The method has been endorsed by leading accountants, courts and regulatory bodies that have been called upon to determine a plan for depreciation accounting. It is the plan which underlies the Commission's present accounting regulations with respect to depreciation. Therefore, it is recommended that the straight line method be adopted."

Further it is pointed out (*Id.* 1835) that in the orders promulgated by the Interstate Commerce Commission November 2, 1926, pursuant to the mandate of paragraph 5 of Section 20 of the Transportation Act of 1920, prescribing methods to be followed by telephone and railroad companies in setting up depreciation charges (118 I. C. C. 295), the Commission unequivocally approved and prescribed the age-life straight-line method of determining annual depreciation allowances. Chairman Eastman, writing the opinion, said (pp. 355-356):

> "In our opinion the premises which underlie the straight-line method are, as we have indicated in an earlier part of this report, in accord with the principles which have been enunciated by the Supreme Court of the United States."

With this view we concur. We have not found any decision of this Court which has specifically approved or disapproved either the sinking-fund or the straight-line method of computing annual depreciation; but we believe that the straight-line method is the only one which is consistent with the principles which this Court has declared.

It is well settled by the decisions of this Court that physical property in utility service, other than land, is subject to deterioration and loss of value from the moment it is put in service; that this deterioration or depreciation is an expense of operation for which the public must pay; and that the fair value of the property upon which the utility is entitled to earn a fair return is not the cost new but is the value arrived at after accrued depreciation has been deducted.

When accrued depreciation is deducted from the cost or value of the property of a utility in order to determine the rate base upon which it is entitled to earn a fair return, the utility loses the right to earn a return upon that loss of value. If an equivalent amount be collected in rates from

the public each year and passed into a depreciation reserve, it is clear that any interest, income, earnings or profits which may accrue from the investment of that reserve will belong solely to the utility, not to the public, and the public will not be entitled to have its rates reduced by reason of the accumulation of interest on the invested depreciation reserve. The earnings of the depreciation reserve offset or compensate the loss of return on the depreciation which the property has suffered.

To illustrate: Let us suppose a utility property worth $100,000 new, which depreciates uniformly from year to year, has a useful life of ten years, after which it will have no salvage value. During the first year of its life the owner will be entitled to earn a return of 7 per cent on $100,000 or $7,000, over and above operating expenses and depreciation charges. At the end of the second year the property will be worth $80,000 and the company will be entitled to earn 7 per cent on that value only, or $5,600. It has suffered a loss of $20,000 in value of its physical property and has suffered a loss of $1,400 income, by reason of the accrued depreciation.

The annual charge to earnings for the purpose of paying for depreciation should, of course be $10,000, and at the end of the second year there would be a fund of $20,000 in the depreciation reserve. The interest upon this fund, at whatever rate per cent it could be invested would be income to the company, and would offset the loss of $1,400 income resulting from accrued depreciation. It could not upon any theory, consistent with right and justice, be considered as the property of the public, nor could the income from it be applied in any way to reduce the amount which the public is required to pay for the use of the property.

The theory that the depreciation reserve is a fund which belongs in equity to the public and is merely held in trust

by the utility for its benefit, was urged upon this Court in *Board of Com'rs* v. *N. Y. Tel. Co.*, 271 U. S. 23, 30-32, but it was held that this reserve belongs exclusively to the utility, and the public has no interest in it, nor to the interest or income which may accumulate upon it.

We think it is clear that the use of the sinking-fund method of setting up depreciation charges, or any other method which takes from the utility and gives to the public the benefit of interest or earnings on the reserve built up out of annual depreciation allowances, is inconsistent with the deduction of accrued depreciation from cost new in arriving at the rate base. (*Whitten & Wilcox, "Valuation of Public Service Corporations,"* Vol. II, p. 1874.)

The report of the Public Service Commission and the opinion of the Superior Court in the case at bar declare that accrued depreciation must be deducted from reproduction cost in arriving at the rate base, and thereby the appellant must be deprived from collecting a fair return on that part of its value which has been destroyed by depreciation; and at the same time the interest which is earned or may be earned on the depreciation reserve must be passed over to the public by reducing the gross revenue which the company may receive. This, we submit, is confiscation, pure and simple.

The annual depreciation allowance should be sufficient, *without interest*, to repay to the owners at the end of the useful life of the bridge the fair value thereof. This amount is 2½ per cent.

Relation of Accrued Depreciation to Annual Depreciation.

Both the Commission and the Superior Court took the view that the claims of the appellant with respect to the amount of *accrued* depreciation which the bridge property had actually suffered and the amount of *annual* depreciation which should be charged against earnings were incon-

sistent (R. 29a, 842-843). They believe that it is inconsistent to base *accrued* depreciation upon *actual* depreciation, and at the same time to base *annual* depreciation upon *theoretical* depreciation.

That we may make the issue clear, let us put an illustration: Suppose a property worth $100,000, with an assumed useful life of 10 years and no salvage, which is valued for rate purposes at the end of the fourth year of its life. It has charged depreciation annually by the straight line method, and accordingly at the end of its fourth year has charged to depreciation, $40,000. It is inspected by experts who determine that it has suffered only 20 per cent actual depreciation, due to the fact that depreciation proceeds much more slowly during the early, than during the late, years of the life of the property.

Under these facts the Commission takes the view that the amount of accrued depreciation should be measured by the amount already charged to depreciation, so that the value of the property for rate purposes should be only $100,000—$40,000 or $60,000; and that it is inconsistent for the company to claim that its property is worth $80,000 for rate purposes, when it has already collected in rates and charged to depreciation, the sum of $40,000.

There is no inconsistency in these claims when the matter is fully understood. The purpose of an appraisal of the reproduction cost new, less accrued depreciation, of a utility property, is to arrive at the fair present value of the property. The appraisal is intended to reflect the *actual*, not the *theoretical* value, at the time of the appraisal. And in order to arrive at such a value it is necessary that the actual depreciation which has accrued should be deducted, and not the theoretical amount which would have accrued if the process of depreciation proceeded uniformly at the same rate throughout the life of the property.

But when we turn to the matter of annual depreciation,

we have an entirely different problem to deal with. The question then is, what is the fair, just and equitable method of collecting from the consumers during the life of the property a sum sufficient to replace the property at the end of its useful life, or to return to the owners their capital at that time. The consumers throughout the life of the property receive service from it, and it is assumed that they all receive the same service and that it is equally valuable and satisfactory. It is fair, therefore, to spread this depreciation charge equally over the life of the property so that the consumers in each year will bear the same proportion of this burden. It is merely an accounting device designed to produce an equitable distribution of depreciation charges over the life of the property, and it has no necessary or direct relation to the depreciated value of the property in any particular year. This was concisely stated by Mr. Nathan B. Jacobs, when he said (R. 146a):

> "I think accrued depreciation is a matter of determining by inspection and examination; annual depreciation is a matter of accounting."

The same view is expressed by Mr. Justice Brandeis in his dissenting opinion in *United Railways* v. *West,* 280 U. S. 234, 264, in which he discussed fully the problem of depreciation. He said:

> "The depreciation charge is an allowance made pursuant to a plan of distribution of the total net expense of plant retirement. It is a bookkeeping device introduced in the exercise of practical judgment to serve three purposes. It preserves the integrity of the investment. Compare *Knoxville* v. *Knoxville Water Co.,* 212 U. S. 1, 13-14. It serves to distribute equitably throughout the several years of service life the only expense of plant retirement which is capable of reasonable ascertainment—the known cost less the estimated salvage value. And it enables those interested, through applying that plan of distribution, to ascer-

tain, as nearly as is possible, the actual financial results of the year's operation. * * *".

The disparity between the *accrued* depreciation and the total of the *annual* depreciation allowances in the early years of the property is marked because in those years actual depreciation lags. In the later years of the life of the property, however, actual depreciation will proceed more rapidly and will catch up to the reserve; so that if the life of the property is accurately estimated the two will be equal at the expiration of its life.

Accordingly the fact that there is a marked difference between accrued depreciation and the total of annual depreciation allowances in the early years of the life of this property does not support the conclusion that the appellant's estimate of either one is wrong.

It is, of course, possible to conceive of a property in which the amount of actual depreciation suffered each year is equal and uniform; and in the case of such a theoretical property the accrued depreciation at the end of each year would equal the total of the annual depreciation allowances. But properties do not depreciate that way. It is also possible that in the case of a large property such as a railroad, or an extensive electric, telephone or gas system, having a multitude of units of property, and being "seasoned," that the amount of actual depreciation is fairly uniform each year. But we are not dealing here with such a property.

We have here the case of a property with an estimated life of 40 years, and one in which actual depreciation is much less in the early years than it will be later. It is therefore not inconsistent to contend that in its early years the actual accrued depreciation is materially less than the sum of the amounts which have been charged annually to depreciation.

It may be urged with some force, however, that if actual depreciation is substantially less than theoretical depreciation, and annual depreciation is computed on the straight line basis, so that the owners of the property receive interest on the reserve, the owners will receive a return on a value greater than the original fair value of the property when it was new.

To return to our illustration of the property worth $100,000, with a ten-year life. Suppose at the end of the fourth year the actual depreciation is only $20,000, and there has been charged to earnings and carried into the depreciation reserve $40,000, the company will earn a fair return on $80,000, the rate base, and will receive interest or income on the reserve of $40,000, or a total value of $120,000, which is in excess of the original value of the property.

If this situation need correction, it should not be corrected by confiscating the entire interest on the depreciation reserve and turning it over to the public, as the Commission and the Superior Court have done in this case, but rather to reduce the annual depreciation allowance by 4 per cent on the amount by which the depreciation reserve exceeds the actual depreciation.

B.

THE RATE OF RETURN SHOULD BE GREATER THAN SEVEN PER CENT.

In *Bluefield Co.* v. *Pub. Serv. Comm.*, 262 U. S. 679, 692, this Court, in discussing the rate of return which should be allowed to a public utility, said:

> "What annual rate will constitute just compensation depends upon many circumstances and must be determined by the exercise of a fair and enlightened judgment, having regard to all relevant facts. A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally

being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties."

And in the more recent case of *United Railways* v. *West*, 280 U. S. 234, 251-252, it was said:

"* * * Nor can a rule be laid down which will apply uniformly to all sorts of utilities. What may be a fair return for one may be inadequate for another, depending upon circumstances, locality and risk.

* * * * * * *

"* * * Sound business management requires that after paying all expenses of operation, setting aside the necessary sums for depreciation, payment of interest and reasonable dividends, there should still remain something to be passed to the surplus account; and a rate of return which does not admit of that being done is not sufficient to assure confidence in the financial soundness of the utility to maintain its credit and enable it to raise money necessary for the proper discharge of its public duties. * * *"

To the same effect are:

Smith v. *Illinois Bell Tel. Co.*, 282 U. S. 133, 160-161.
Wabash Valley Elec. Co. v. *Young*, 287 U. S. 488, 501.
Los Angeles Gas Co. v. *R. R. Com.*, 289 U. S. 287, 319.

The rate of return allowed by the Pennsylvania Commission to water, gas, electric and telephone utilities, which

enjoy a monopoly of public service in their respective fields, is 7 per cent. (*Blanning on "Public Utility Regulation in Pennsylvania,"* pp. 57-58.)

The appellant contends that under the circumstances shown by this record it is entitled to earn a return of 9 per cent upon the fair present value of its property, because such a rate is necessary to attract capital into this field of enterprise and to give security and stability to the investment, and because the property is exposed to unusual hazards.

The evidence showed that toll bridge properties both in Pennsylvania and elsewhere have not been attractive to investors. For this reason high rates of interest have been necessary in order to attract capital into this field of investment. At the time of the making of the appraisal in this case, the rates demanded for financing privately owned toll bridges were so high that it was almost impossible to finance them (R. 161a, 172a-173a, 177a-180a). The Tacony-Palmyra bridge, a privately owned bridge over the Delaware, outside of Philadelphia, had to pay 10 per cent for money (R. 172a).

The high cost of money for toll bridges is due to the unusual hazards to which such property is exposed. The hazards to which the appellant's property is exposed are of two kinds: (1) physical, and (2) economic.

The physical hazard is that of damage or complete destruction by flood and ice. Mr. Masters testified (R. 667a-668a): "I have had a pretty broad experience in the rivers across the country, and I don't know of any river that has as much ice, or as great a flood of ice, as the Susquehanna. I consider it one of the worst rivers in the country in the matter of ice." He further testified that the history of the bridges at Harrisburg and Clark's Ferry show that they are taken out by ice on an average of once every twenty or

thirty years. The Commission's engineer also recognized the existence of these unusual hazards (R. 238a).

The economic hazards to which this property is exposed are the possible competition of other bridges along the highway routes which now lead to this bridge, and the improvement of various highway routes which will afford travelers good roads over routes which will not require them to cross at Clark's Ferry. New competitive routes may be developed which will cut the traffic of the bridge to a fraction of its present amount (See Resp. Ex. No. 3, "Report of Morris Knowles, Inc., on Survey of Traffic over the Clark's Ferry Bridge, Clark's Ferry, Pa.," R. 550a, particularly Tables 14 and 15, at R. 581a-582a).

The construction of private toll bridges or public free bridges, elsewhere along the river, even though they be 15 or 20 miles distant, may so deflect traffic as to reduce the appellant's income materially. Changes in the character of vehicles may render the bridge obsolete and require its abandonment before the end of its useful life. All of these are very real and serious dangers to which the property is exposed.

A toll bridge property, located as the appellant's property is, is not a monopolistic utility. In this respect it differs from water, gas, electric and other like utilities. They serve a definitely chartered territory where no competitor is permitted to invade. They are secure, therefore, in the enjoyment of whatever rate of return the legislature, through its agent, the Public Service Commission, allows. But the appellant is not, and cannot be, protected from the effects of the improvement of new routes of travel which will lead traffic into other channels. It is in competition with the highway development of the country and from this competition it cannot be protected.

Because of the high rates demanded for money and of the hazards which we have referred to, Mr. Masters tes-

tified that in his opinion the rate of return to the appellant ought to be from 8 per cent to 10 per cent (R. 162a), and Mr. Jacobs' opinion was that it should be from 9 per cent to 10 per cent (R. 166a). No evidence was offered in either case to the contrary.

The Superior Court, in its opinion, declined to allow a greater return than 7 per cent, because it said that the physical hazards to which the property was exposed were "adequately protected" by insurance, the annual premium of which, $1,700, was allowed as an operating expense (R. 846).

The evidence does not disclose the nature, character, extent, or limitations of the insurance referred to. There is nothing in the record to sustain the finding that this insurance "adequately protects" the appellant's property against catastrophe. And, as we have stated, there is no protection whatever against the economic hazards.

Under these circumstances, we submit that the limitation of the rate of return to 7 per cent is confiscatory.

III.

The Form of the Commission's Order makes it Necessarily Confiscatory.

The Commission by its order directed and required (R. 34a):

> "That Clark's Ferry Bridge Company file, post and publish, effective thirty (30) days from date hereof, upon not less than one (1) day's notice to the public and this Commission, a new tariff calculated to produce an annual gross revenue of *not more than* $84,125."

It then prescribed a tentative schedule of rates, but in order that there might be no doubt of its intention or of its ability to enforce its order, it further provided (R. 35a):

"That said company file with this Commission monthly statements of income and operating expenses, showing the number of vehicles passing over its bridge in each class of traffic as contained in its tariff."

The annual gross revenue, which by this order is made the maximum amount which the company may receive, was made up as follows (R. 32a):

Fair Return (7% on $767,800)	$53,746
Annual Expenses	22,700
Annual Depreciation	7,678
Total	$84,124
To this the Superior Court added (R. 847) Annual Bond Amortization	1,331
Making a total of	$85,455

The fair value of the property as found by the Commission and the Superior Court was $767,800 and the fair rate of return was fixed at 7 per cent. Accordingly the amount of annual gross revenue fixed by the order was the *minimum* amount which the company must receive in order to avoid confiscation. The line of reasonable rates was fixed at the line of confiscation.

Assuming, *arguendo*, that the findings of the Superior Court were correct, we could not complain in this Court of the fact that the Commission and the court below had failed to allow any margin whatever above the line of confiscation; for we understand that in cases of this character this Court merely enforces the guarantees of the Fourteenth Amendment. But when the Commission and the Superior Court go further and make the line of confiscation the *maximum* which the company *may* receive, an entirely different situation is presented.

It is obvious that no one can tell in advance how many vehicles of different tariff classifications will pass over this bridge in a year, and no one can tell in advance what annual gross revenue will be produced by a given schedule of rates. Therefore it is impossible for the company to design a tariff which will produce "an annual gross revenue of *not more than* $85,455," unless it estimates a margin sufficiently below the line of confiscation that no reasonable fluctuation of traffic will carry its revenue into the forbidden territory of "more than $85,455." Such a tariff must necessarily result in confiscation.

The company could, of course, set up its schedule of rates and collect tolls for such part of a year as would enable it to receive $85,455 and thereafter until the end of the year collect no tolls whatever. But this would unquestionably violate the provisions of the Public Service Company law which forbid discrimination between patrons (*Act of July* 26, 1913, P. L. 1374, Art. III, Sec. 8, *Purdon's Penna. Statutes Annotated,* Title 66, Sec. 262).

It may be suggested also that this order would not be construed so as to forbid the receipt of more than $85,455 if the tariff in force had been designed in good faith to produce that sum. One answer to this is that the validity of the order is to be determined by its own provisions, and if those provisions show that it is invalid, it cannot be saved by assuming that the Commission, the administrative officers and the courts of the State may not enforce it as it is written.

But there is clear evidence that the Commission and the Attorney General of the Commonwealth intend to enforce it just as it is written. The order in the prior case was similar in character. It directed a tariff "which will provide toll rates designed to yield annual gross revenue not in excess of $85,905" (R. 506a). Such a tariff was pre-

pared and filed, effective March 1, 1927, together with the traffic data upon which the estimate of revenue was based, and was accepted by the Commission as a compliance with the order. But notwithstanding this fact, the Commission in its report and order in the present case made reference to the limitation of revenue in the prior order, saying (R. 34a):

> "Although the Commission directed that a tariff be filed calculated to produce $85,905 per year, the company has collected receipts in excess of this amount. * * * Under the decisions of the appellate courts of the state this Commission may not consider in this proceeding the propriety of these charges in the past. The matter will, however, be referred to the Attorney General for such action as the Public Service Company Law may indicate."

Pursuant to that declaration the matter was referred to the Attorney General and he has instituted an action in assumpsit against the company in the court of common pleas of Dauphin County to recover penalties aggregating $45,950 which is $50 per day for every day, within the statute of limitation, that the company had in effect its tariff which produced more than the allowed gross annual revenue. The basis of this action is the alleged violation of the order of the Commission which occurred when the company's annual revenue exceeded the maximum fixed in the order, and the penalty of $50 per day is the one fixed by Art. VI, Secs. 35 and 36, of The Public Service Company Law (*Act of July* 26, 1913, P. L. 1374, *Purdon's Penna. Statutes, Annotated,* Title 66, Secs. 901-902) for violations of provisions of the statute or the final orders of the Commission. That action is still pending and undetermined.

Thus under the practical construction placed by the Commission and the Attorney General upon the order of the Commission, the appellant must, at its peril, devise a sched-

ule of rates which will not produce more than $85,455. And in order to avoid the possibility of a suit for penalties aggregating $18,250 per year ($50 per day for 365 days) it must frame a schedule of rates which will allow a substantial margin of safety under the maximum revenue fixed by the order.

Such an order, we submit, clearly requires the fixing of rates which are confiscatory, and deprives the appellant of its property without due process of law.

Conclusions.

The Commission and the Superior Court concluded that the valuation placed by the Commission upon the appellant's property in 1925, in a prior proceeding, was *res judicata* and was conclusive upon the appellant in this case, in the absence of evidence of an increase in price levels. For this reason they refused to reopen and redetermine either the cost or the fair value of the bridge property, although there was abundant evidence, not contradicted, that the cost which the appellant had paid to its contractor in 1925 was less than the value of the property which it acquired under the contract.

The conclusion that the prior valuation was *res judicata* was erroneous because it was purely a legislative finding upon which a rate order had been predicated. No judgment had been rendered.

The prior valuation was based solely upon original cost to the company; and, as it was given controlling weight in this case, despite the evidence that present fair value was greater, the judgment appealed from violates the rule of this Court that a utility is entitled to a fair return on the fair present value of its property, whether that be greater or less than its original cost.

The fair value of the appellant's property in 1930 was substantially greater than the rate base of $767,800 fixed

by the Commission and the Superior Court. The estimate of reproduction cost new, less accrued depreciation, made by the appellant's engineers, was sustained by the evidence. This amounted to $970,058.00.

In fixing the allowable gross revenue the Commission and the Superior Court allowed only 1 per cent for annual depreciation, holding that the public was entitled to interest on the accumulated depreciation reserve, although they held, at the same time, that accrued depreciation must be deducted in fixing the rate base. The result of this ruling was to confiscate the income or interest on the depreciation reserve, which belong solely to the utility. The annual depreciation allowance should have been 2½% × $844,512, or $21,112.

The rate of return should have been fixed at 9 per cent. All the evidence on the subject sustained that rate, and it was justified by the circumstances surrounding the appellant's property.

The allowed gross return should, accordingly, have been computed substantially as follows:

Fair Return (9% of $970,058)	$87,305
Operating Expenses	22,700
Annual Depreciation	21,112
Annual Bond Amortization	1,331
Annual Gross Revenue	$132,448

The judgment of the Superior Court fixing the annual gross return at $85,455 was confiscatory.

Moreover, the form of the order of the Commission, approved by the Superior Court was such that it fixed as a *maximum* gross revenue the *minimum* amount which the appellant must receive (under the Court's findings), if confiscation is to be avoided. The necessary result of such an order is confiscation.

We respectfully submit, therefore, that the judgment of the Superior Court will result in depriving the appellant of its property without due process of law, and should be reversed.

Respectfully submitted,

GEO. ROSS HULL,
Attorney for Appellant.

APPENDIX.

Summary of the Evidence Before the Commission.

Geography.

The Clark's Ferry Bridge spans the Susquehanna River at a point approximately fourteen miles north of Harrisburg and several hundred yards north of the confluence of the Juniata and Susquehanna Rivers (R., 537a, 631a). At this point the Juniata flows almost due north and south and the Susquehanna from northeast to southwest. The bridge crosses from southeast to northwest. The end of the bridge nearest to Harrisburg is generally referred to in the testimony as the southern end, and that nearest to Duncannon and Newport as the northern end.

A State highway from Harrisburg, through Rockville, Dauphin, and Speeceville, leads to the southern end of the bridge and, passing it, continues on the same side of the river to Halifax and Millersburg (R., 632a). This road was improved as far as Clark's Ferry by the State Highway Department by the laying of a concrete pavement in 1919 and was continued north to Millersburg in 1922 (R., 742a). From Millersburg north to Sunbury, a distance of 25 miles, one-half is now improved, and on the remaining half bridges are now being constructed to eliminate grade crossings and studies for the permanent improvement of the roads have been made (R., 354a-356a).

On the opposite side of the river a State highway runs north from the bridge through Liverpool and Selinsgrove to Sunbury. A concrete pavement was laid upon this road from the bridge to Liverpool in 1922 (R., 742a), and on to Sunbury in 1924 (R., 710a). At a point about a mile and a half or two miles north of the bridge, at Amity Hall, this roads forks, and the left fork follows the Juniata River to Newport and Millerstown (R., 632a, 701a). This road has now been completely improved, most of it with concrete and a small portion, near Amity Hall, with macadam. An improved State highway connects Liverpool with Millerstown.

About a hundred yards west of the north end of the bridge, a county bridge carries another State highway across the Juniata River and into the borough of Duncannon, from the western end of which an improved State highway runs westward to New Bloomfield and the same route runs southward along the Susquehanna River through Cove, Perdix, Marysville, Enola, and West Fairview to Wormleysburg which lies opposite Harrisburg. At the time of the hearings in the former case, neither of these roads had been improved with concrete. The road south from Duncannon to Wormleysburg had a macadam surface and was maintained in fair condition, but was narrow, had many curves and was somewhat dangerous (R., 684a, 700a). At the time of the hearings in the present case, however, more than half of this highway had been permanently improved with a broad pavement of concrete and the only unimproved portion lies between Marysville and Wormleysburg. Up to the present time the condition of this road on the west side of the river has been such as to deter traffic and to induce it to flow over Clark's Ferry Bridge south on the east side of the river and again across the Harrisburg bridges to the west shore.

A State highway runs from Newport through New Bloomfield, Dromgold, Sterrett's Gap, to Carlisle and through Mt. Holly Springs and Biglerville to Gettysburg. This road was under construction at the time of the hearing in the former case. It has since been completed. It provides a route which is almost due south from Newport to Gettysburg and reduces by 26 miles the distance for tourists going east over the William Penn Highway destined for Gettysburg, Baltimore, and Washington (R., 685a, 686a).

The Clark's Ferry Bridge is located in a rural area. The population within a radius of 5 miles is about 3,000 (R., 633a). The nearest city is Harrisburg, which is 14 miles south.

The Old Bridge Property.

The Clark's Ferry Bridge was originally constructed as a part of the extensive transportation system built by the Commonwealth in the first half of the last century. It was

designed not only to accommodate persons and vehicles using the highway but also to carry a sort of towpath on the downstream side by means of which canal boats could be drawn from one side of the Susquehanna to the other. Before the site at Clark's Ferry was chosen, a great deal of preliminary engineering work was done and a bridge was actually begun at Duncannon. This attempt was abandoned, however, after several hundred thousand dollars had been spent there (R., 773a, 664a).

The bridge at Clark's Ferry was begun in 1828 and finished in 1829. Immediately after it was opened it became necessary to rebuild the wooden construction because it was too weak. The bridge was partially destroyed by ice and flood and was re-constructed in 1837 and 1838 at a cost of $98,973. It was again partially destroyed by flood in March, 1846, and the remainder was blown down in May, 1846, after which it was again re-constructed, but we have no record of the cost. In March, 1859, it was partially destroyed by a wind storm and the reconstruction cost was $24,294 (R., 666a).

Shortly thereafter the State Canal System, of which this bridge formed a part, was sold for $25,000,000 to the Pennsylvania Railroad Company. Two spans of the bridge were destroyed in 1891 and were rebuilt, but the record does not show the cost (R., 666a).

Prior to 1915 the earnings of the bridge were very small (R., 785a). On April 7, 1915, Christian W. Lynch, acting for himself and for William Jennings, P. F. Duncan and William Wills, purchased this bridge property at a public auction in Philadelphia where it was sold at a foreclosure sale as the property of the Pennsylvania Canal Company. The purchase price was $4,500 (R., 713a-715a). In the summer of 1915 the present Clerk's Ferry Bridge Company was incorporated by the men above mentioned and on September 30, 1915, the company purchased the bridge property from Christian W. Lynch for the sum of $45,000, which was paid in the following manner: $3,000 in cash, $20,000 in First Mortgage bonds of the company, and $22,000 in common stock of the company. The incorporation was, of course, subject to the approval of The Public Service Com-

mission and was approved by it (R., 711a, 713a, 714a, 717a). The authorized capital stock of the company at this time was $25,000 and its indebtedness $20,000.

If the bridge had been in proper repair it would have been adequate to carry the traffic offered to it at that time (R., 682a); but it was in poor condition and large expenditures had to be made for its reconstruction and repair (R., 731a-734a, and Schedule A at R., 789a).

In 1921, however, the increase in the volume and weight of traffic offered began to make this bridge structure obsolete and this obsolescence proceeded rapidly until in 1924 the appellant company determined that it was necessary to replace the old bridge with a new one of modern design and construction (R., 633a-634a). Frank M. Masters, a bridge engineer of wide experience, was employed to make an inspection of the bridge and a study of the problems, and he presented a report upon three types of construction, of which the concrete type was adopted. He was then engaged as engineer to design the new bridge and to superintend its construction (R., 634a-635a).

The old bridge was of combination truss and arch construction. It was a covered wooden bridge, originally constructed to carry two-way traffic. It was necessary within the last ten years to restrict it to one-way traffic with provision at the piers for the passing of vehicles. It consisted of ten spans, supported by stone piers with stone abutments. It was 2,074 feet from face to face of the abutments (R., 633a).

At the time when Mr. Masters was employed by the appellant company he made a careful inspection and study of the old bridge property, and prepared a valuation and appraisal which he submitted to the appellant on December 17, 1923. A transcript of this report was offered in evidence in the former case and there identified as Respondent's Exhibit No. 7. It is found in the present record at page 773a. It included a carefully prepared estimate of the reproduction cost new which he estimated at $373,832. The reproduction cost new less depreciation he estimated at $265,112.

Although fully adequate to carry all of the traffic offered the superstructure of the bridge was then in bad repair. It was frame. The roof leaked. The floors were poor and its general condition was bad (R., 713a, 731a-734a). The company began at once to make extensive repairs. The indebtedness of the company was increased to $30,000 in 1917 and to $50,000 in 1918, and the new capital thus borrowed was used in the construction of new spans (R., 745a). The stockholders bought these bonds.

The company continued with a capitalization of $25,000 stock and $50,000 bonds until 1923 when the stock was increased to $250,000, the new stock being issued as a stock dividend. An appraisal of the company's property at that time indicated a value very much in excess of that at which it had been carried on the books, and the property accounts and capital stock were increased accordingly (R., 717a, 735a).

The New Bridge Property.

In the spring of 1924 bids for the construction of the new bridge were invited. Plans and specifications were furnished to thirteen contractors, of whom eight presented bids (R., 549a). The contract was let to Vang Construction Company. It was executed June 10, 1924, and called for completion on October 1, 1925, a period of fifteen and two-thirds months. It provided for a daily bonus of $150 to the contractor for earlier completion and a penalty for later completion. By reason of the fact that Vang Construction Company employed an unusual amount of plant and equipment and an unusual number of men, it was able to complete the bridge within twelve months (R., 152a-154a). The bridge was opened to traffic May 30, 1925, and the contractor earned a bonus of $22,050.

To finance this construction there were issued and sold $175,000 of preferred stock and $450,000 of bonds (the then outstanding bonds of $50,000 being retired). (R., 606a.) At the time of the filing of the complaint in the first case the company had outstanding the following securities:

Common stock	$250,000
Preferred stock	175,000
First Mortgage Bonds	450,000

It also had bills payable in the amount of $70,000 (R., 790a).

Roy F. Godfrey, an accountant employed by Main and Company, prepared an accounting report which was offered in evidence in the former case as Respondent's Exhibit No. 9. It is found in the Record in this case at 785a to 791a and is explained in detail in the oral testimony of Mr. Godfrey at pages 759a-770a. It sets forth balance sheets and profit and loss statements as of the close of each year from 1915 to 1924, and as of July 31, 1925, as the same appeared upon the company's books. (Schedules "C" and "D", R., 790a) Because of the fact that the company had not been guided by an engineer or accountant during these years in the allocation of capital charges, it had not charged to its property accounts all of the expenditures which should have been charged to capital. Mr. Godfrey, in collaboration with the officers of the company, allocated these charges properly and prepared adjusted balance sheets, and profit and loss statements for the same periods. (Schedules "A" and "B", R., 789a.) He included in this exhibit also analyses of the old bridge account and of the new bridge account as of July 31, 1925, as the same were after adjustment. (R., 787a-788a, 791a.) Exhibit No. 9 thus presents a complete summary of the financial history of the appellant company from the time of its incorporation in 1915 to July 31, 1925. In the present case a similar accounting report was prepared by James E. Keane, one of the Commission's accountants. This is marked Complainant's Exhibit No. 1 and is found in the Record pages 423a-462a. It brings the financial history of the company down to February 28, 1930.

The present Clark's Ferry Bridge is a new structure, consisting of fifteen concrete arches, open spandrel type of construction, with twenty-foot wide clear roadway and a four-foot wide sidewalk on the upstream side. It has a total length of 2,075 feet, face to face of abutments, and an extended approach at each end. It is located about 54 feet (center to center) downstream from the old bridge.

Valuation of New Bridge Property.

The evidence offered by the appellant to support its estimate of fair present value in the former case differed entirely from that offered in the present case. A summary of the evidence in each case will be given separately. From this it will appear that the evidence in the present case is wholly new, and the Commission erred in disregarding it and in giving conclusive effect to the findings made in the former case.

Evidence of Fair Present Value in the Former Case.

Frank M. Masters, the engineer who planned and supervised the construction of the new bridge, testified that the reproduction cost new of this structure was substantially in excess of its actual cost to the company, by reason of the fact that the contractor had made an improvident contract, and had made a bid and contracted to do the work for less than its actual cost.

In support of this testimony, and as some measure of the difference between cost to the company and fair present value, the losses sustained by the contractor and the amount of a fair profit on the contract were proven. L. A. Reinhard, an auditor of Vang Construction Company, testified that the actual out-of-pocket loss to the contractor on labor and materials, the loss sustained on overhead, plant and depreciation, and the loss of a fair profit on the contract were as follows (R., 606a-609a):

Loss on labor and material	$61,140
Loss on overhead, plant, depreciation, etc.	82,000
Loss of fair profit	70,000
Total Loss	$213,140

Using this loss as a measure of the difference between actual cost to the company and reproduction cost new, the company's engineer estimated the reproduction cost new of the bridge at $1,019,933.17, and the total fair value of the bridge property used and useful in the public service

at $1,122,726.50. These values were made up, as shown in Exhibit No. 5 (R. 438a), of the following items:

1. Cost of bridge		$754,751.07
2. Value of old bridge (depreciated) remaining used and useful in the new bridge		52,101.20
3. Excess of present value of new bridge over cost, as indicated by:		
(a) Loss of contractor upon labor and material only	$61,140.90	
(b) Contractor's overhead, depreciation and plant charge	82,000.00	
(c) Fair profit to contractor	70,000.00	
		213,140.90
4. Reproduction cost new		$1,019,993.17
5. Allowance for working capital		2,733.33
6. Value of location		100,000.00
Total present fair value of bridge property		$1,122,726.50

(1) The first of these items, "Cost of Bridge, $754,751.07," included the cost of constructing the new bridge, approaches, toll houses and the superintendent's house and office; engineering; miscellaneous charges, including the additional real estate acquired for bridge purposes; cost of financing; interest during construction; the estimated cost of removing the old bridge structure, and the estimated cost of finishing, planting, gardening, etc., all of which were set forth in detail in Exhibit No. 6 (R. 439a-446a).

(2) The second item, "Value of old bridge (depreciated) remaining used and useful in the new bridge, $52,101," included that part of the old bridge property, consisting of the two abutments, retaining walls, approach fills, and real estate, which continued used and useful in the public service.

(3) The third item, "Excess of present value over cost, $213,140," is the difference between cost to the company

and present value, as measured by the amount which the contractor lost, as we have explained above.

(4) The fourth item, "Reproduction cost new, $1,019,993," was the total of the preceding items, and represented the engineer's estimate of the reproduction cost new, arrived at in the method described above.

(5) "Allowance for working capital, $2,733.33," was one-twelfth of the estimated operating expenses for one year, and was the amount which the Company must keep on hand for the transaction of its business (R. 758a, 773a).

(6) "Value of Location, $100,000," represented the peculiar value of the property of the company for bridge purposes.

Upon the evidence thus submitted, the Commission in the former case fixed the value of the Appellant's property for rate-making purposes at $767,800. In order to show the specific items of value upon which the estimate of the Appellant and the findings of the Commission differed, the following table is presented:

Item	Claimed by Appellant	Allowed by Commission	Decrease	Increase
Cost of new construction	$592,123.41	$592,123.00	.....	.....
Additional expense on toll houses	.....	130.00	.....	$130.00
Engineering	39,271.97	39,272.00	.....	.....
Misc. Charges	4,270.72	4,271.00	.....	.....
Cost of Financing:				
Discount on Sale of Bonds	58,500.00	31,500.00	$27,000.00*	.....
Dis. and Com. on Pfd. Stock	10,843.00	843.00	10,000.00	.....
Prof. and other services	5,179.86	5,180.00	.....	.....
Interest during Constr.	20,912.11	20,912.00	.....	.....
Cost of finishing, planting, etc	1,700.00	1,700.00	.....	.....
Value of old bridge transferred to new	52,101.20	49,100.00	3,001.20	.....
Cost of removing old bridge.	21,950.00	21,950.00	.....	.....
Incorporation Ex	.....	819.00	.....	819.00
Excess of present value of new bridge over cost	213,140.90	.....	213,140.90	.....
Working Capital	2,733.33	.....	2,733.33	.....
Value of Location	100,000.00	.....	100,000.00	.....
Totals:	$1,122,726.50	$767,800.00	$355,875.43	$949.00

*Order of the Commission allowed this to be amortized out of earnings.

Evidence of Fair Present Value in the Present Case.

Upon the evidence submitted by the Appellant in the former case the Commission took the view, and its counsel argued in the Superior Court, that even if it were true that the fair present value of the bridge exceeded its original cost to the company, the Appellant had not offered the right kind of proof to demonstrate that fact; but it should have offered the Commission a theoretical reproduction cost estimate such as is usually presented in rate cases.

Accordingly when the institution of the present proceeding was imminent, in the fall of 1929, the Appellant employed the American Appraisal Company, of Milwaukee, Wis., to make a careful appraisal and estimate of the reproduction cost new, and accrued depreciation, of the bridge property. This appraisal was made for the specific purpose of supplying the sort of evidence which the Commission said was lacking in the former case.

James W. White and Paul B. Johnson were the engineers assigned by the American Appraisal Company to do this work, and both of them testified before the Commission. Both were men of extensive experience both as construction engineers and appraisers.

James W. White detailed his experience of twenty-five years as a valuation engineer (R. 51a-56a) and testified that he had directed the making of an appraisal of the Appellant's property in the fall of 1929, valuing the same as of September 1, 1929 (R. 56a-57a). He was assisted by Paul B. Johnson, several assistant engineers, and the home office staff of the American Appraisal Company. The results of their work were embodied in a report, identified as Respondent's Exhibit No. 1 (R. 507a-539a), and offered in evidence (R. 70a). On direct examination Mr. White described the examination of the property made by him and Mr. Johnson, and explained the methods followed in arriving at his valuation (R. 56a-66a). The conclusions stated in this report and in the testimony (R. 62a-63a) were:

Reproduction cost new	$891,926.30
Less observed accrued depreciation	16,282.00
Reproduction cost new less depreciation	$875,644.30

In addition to this value, Mr. White included in his report two other elements of value in the appellant's property, as follows:

Attached business value	$57,000
Location value	100,000

These were further explained by Mr. White in his testimony (R. 63a-66a, 126a).

He was called for cross-examination by the Commission and explained the results of his observation of depreciation of the bridge structure, stating that he had arrived at the amount of accrued depreciation from such observation and without consideration of the theoretical life of the bridge (R. 117a-121a). He was cross-examined also with respect to the elements of intangible value which were included in his appraisal (R. 122a-127a).

Paul B. Johnson, called by the appellant, testified that he was an engineer employed by the American Appraisal Company and had collaborated with Mr. White in appraising appellant's property. He outlined his experience of twenty-three years as a construction and valuation engineer, and described the methods followed in making the appraisal and arriving at the amount of accrued depreciation (R. 71a-79a). On cross-examination he was interrogated at length with respect to various unit costs which had been used in his appraisal. All of his costs were based on local conditions and local prices for materials and labor, such as would be encountered in a reproduction of the property (R. 76a).

On cross-examination he was interrogated at length with respect to many items of the appraisal (R. 82a-117a), and particularly with respect to certain unit costs entering into his appraisal: Item 2, approach fill (R. 98a-100a); Item 17, reinforcing steel (R. 101a-103a); Items 8 and 10, 1:2:4 concrete (R. 103a-111a). The item of "coffer dams," having been entered in the appraisal as a lump sum amounting to $51,681.82, counsel for the Commission requested that he submit an exhibit showing how this figure was arrived at. This was subsequently done and the exhibit giving this de-

tail was identified as Appendix to Respondent's Exhibit No. 1 (R. 540a).

FRANK M. MASTERS, the designing engineer of the bridge, was called by the appellant (R. 147a). He testified with respect to legislation, permits, approvals, etc., which must be obtained before such a bridge may be built (R. 147a-148a). He explained why fill was hauled from Steelton, and that it could not be taken out of the river bed (R. 149a-150a). He produced Respondent's Exhibit No. 2 (R. 549a) which was a tabulation of the bids received in 1924 for the construction of the bridge, and told of the negotiations which he had had with the successful bidder after the bids were opened. He testified that Vang Construction Company had employed an unusual amount of equipment in the construction of this bridge in order to secure early completion and earn a bonus (R. 152a-154a).

Subsequently, when recalled to the stand this witness testified with respect to the extensive knowledge and experience he has had in the financing of privately owned toll bridges. He testified that the costs of financing were almost prohibitive, and that the allowance of $58,000 made by the American Appraisal Company was very reasonable (R. 172a-174a). He said that he and his associates had been retained as engineers by the Susquehanna Utilities Company to design a bridge on top of a power dam across the Susquehanna River at Millersburg, fourteen miles north of Clark's Ferry (R. 174a). He said that it was not fair to compare the unit cost of reinforcing steel used in the Columbia-Wrightsville bridge with that used in the Clark's Ferry because in the former steel was used in much greater quantity, and was steel rolled and cut to standard lengths in the mill, while the latter was bent and shaped in the field (R. 174a).

LYNN B. CURRY, an engineer in the employ of the Commission, was called by the Commission in rebuttal (R. 220a). He testified as to his experience and qualifications (R. 220a-225a) and stated that he had made an analysis of the evidence presented in the former case, for the Bureau of Engineering, and had been directed to make an independ-

ent study and valuation in this case (R. 225a-226a). He produced an appraisal which he had prepared, based upon the same inventory which was used by appellant's engineers. This appraisal was identified as Complainant's Exhibit No. 3 (R. 465a), and estimated the value of the appellant's property as follows:

Reproduction cost new	$783,274
Depreciation accrued (4% Sinking Fund Method)	41,403
Reproduction cost new less depreciation	741,871

He described the methods followed in making this appraisal and the conclusions reached (R. 227a-240a). He did not present any testimony or express any opinion respecting the amount of annual depreciation and maintenance which should be allowed.

On cross-examination he was examined with respect to those items of physical property in which his appraisal differed materially from that of the Appellant's engineers, and particularly in regard to his estimates of the value of intangibles (R. 276a-354a; 357a-389a). It was in dealing with these values that the greatest differences appeared between the Appellant's and Commission's estimates, and with respect to these values this witness showed a lack of experience, information, investigation and study, which rendered his testimony in this field wholly unreliable.

He produced and offered in evidence the following Complainant's Exhibits:

No. 6, showing how he had arrived at his estimate of the value of that portion of the old bridge structure which remained and is used and useful in connection with the new bridge (R. 467a).

No. 7, showing how he supported his appraisal of the cost of coffer dams (R. 468a).

No. 8, a tabulation of bids received on the Columbia-Wrightsville bridge, as published in the Engineering News-Record on July 4, 1929 (R. 469a).

No. 9, a tabulation of the bids received for the Coplay-Northampton bridge (R. 470a).

No. 10, a schedule of labor prices from 1924-1930 (R. 471a).

No. 11, a schedule of the trends of material prices from 1924-1930 (R. 472a).

Subsequent to the close of the hearings he furnished for the record an itemized schedule of his estimated cost of financing, which we have marked Complainant's Exhibit No. 12 (R. 473a); and a schedule of data relating to the Coplay-Northampton bridge, which we have marked Complainant's Exhibit No. 13 (R. 474a).

Annual Depreciation.

FRANK M. MASTERS, in the former case, testified that the generally accepted rate of depreciation was 2 per cent computed on a straight-line basis, the estimate of the useful life of such structures being 50 years. This was the rate applied by the State Highway Department in its calculations (R. 686a-687a).

In the present case the Appellant called Mr. Nathan B. Jacobs, of Morris Knowles, Inc., to testify on this subject (R. 130a). After stating his experience and qualifications as an engineer he testified that he had made a special study of the property of the Appellant in order to determine what amounts should be allowed for maintenance and for annual depreciation. He concluded that the sum of $1,800 per year for maintenance would be reasonable, unless it became necessary to waterproof the concrete, in which event a greater allowance would be required. He estimated that waterproofing the bridge would cost about $45,000 (R. 131a-135a).

With respect to annual depreciation he testified that in his opinion this allowance should be made upon the straight-line method, because: (1) It is the most simple and does not require the building up of any theoretical or actual sinking-fund or retirement reserve. (2) The Appellant differs from a water company or other like utility in that it has no property development or plant extension into which it could invest such a reserve as is contemplated by the sinking-fund method. And (3) this bridge is part of a transportation

system, competitive and not monopolistic.. This utility is likely to make more in the early years of its life than it will later. Hence the straight-line method of computing annual depreciation is more appropriate (R. 135a-138a). He estimated the useful life of the bridge at 40 years (R. 138a) and the fair annual allowance for depreciation, at 2½ per cent of the depreciable property (R. 142a).

On cross-examination he pointed out that annual depreciation is a matter of accounting, while accrued depreciation is a matter of inspection and examination, the two being independent of one another (R. 146a).

Mr. Masters also testified at the present hearing with respect to the allowance which should be made for annual depreciation. He estimated the useful life of the bridge at 30 to 50 years, and concurred in the view of Mr. Jacobs that annual depreciation should be computed and allowed on a straight-line basis (R. 154a-160a).

Mr. Curry, the Commission's engineer, made no study or estimate of the annual depreciation allowance, but made an estimate of the probable useful life of the bridge in connection with his estimate of accrued depreciation. He estimated the life of the bridge at 45 years (R. 237a-238a, 405a).

Neither the complainants in the former case, nor the Commission in this case produced any evidence concerning the proper amount of the annual depreciation allowance. And in particular, there was no evidence to support the allowance of 1 per cent made in the former case (R. 504a), and adhered to in the present case, by the Commission (R. 32a).

Present and Probable Future Revenue.

The annual revenue of the appellant company from tolls from 1906 to 1923, inclusive, is shown at page 785a, and the revenue from 1924 to 1929, inclusive, is shown at page 451a, of the record. The revenue for January and February, 1930, is shown at page 452a, and monthly reports from March, 1930, to February, 1931, are shown at pages 476a-484a.

The revenues from 1924 to 1930, inclusive, were:

1924	$90,203
1925	124,021
1926	118,718
1927	122,805
1928	135,499
1929	141,538
1930	130,314

The monthly revenues in 1930 varied from $5,496 in January to $17,883 in August. They are affected from time to time by the road construction work which has closed certain roads and required traffic to flow over the bridge which would not normally do so.

In order to forecast the probable future revenue of the bridge the appellant employed Morris Knowles, Inc., to make a traffic study. They assigned to the work Mr. Wilfred Jupenlaz. He was called as a witness by the Appellant and testified that he is a civil engineer and has specialized in the making of traffic studies (R. 188a-189a). He made a complete and detailed study of available traffic data in order to determine the probable traffic over the Clark's Ferry Bridge during the succeeding five years, and the effect which the improvement of various highways in the vicinity of the bridge would have upon such traffic. The results of this study were embodied in a report which was identified as Respondent's Exhibit No. 3 and offered in evidence (R. 550a-595a).

He testified in detail as to the methods followed in assembling the data and formulating the conclusions contained in the report (R. 190a-212a). The distribution of traffic, based upon its origin and destination, was based upon a count taken at the toll house on March 4, 1930 (R. 192a). In order to check the accuracy of the conclusions, another count was taken on April 10, 1930 (R. 209a). The results showed a variation seldom in excess of 1 per cent (R. 210a). He was cross-examined skillfully and in detail by the assistant counsel for the Commission in regard to all of the details of his report (R. 241-a-275a).

The conclusions drawn from this study are set forth in Tables 14 and 15 (R. 581-582a). Table 14 shows the estimated annual traffic, and Table 15 the estimated annual revenue, to 1935, in the event that the existing highways remain unchanged, and in the event that certain highway improvements (Designated A to G, respectively) or combinations of improvements be made. The study also shows that whereas the improvements heretofore made in the adjacent highways have tended to increase the traffic and the revenues of the company, the improvements which are now under construction or contemplated for the future, will all tend to decrease them. Although some variation may be noted in the estimated and actual revenues for 1930, 1931 and 1932, the trend of the gross revenue, as shown on Tables 15 (R. 582a) is forecast with reasonable accuracy; and the effect which various highway improvements will make may be reasonably expected to follow this forecast.

Rate of Return.

The property of a bridge company is exposed to unusual hazards by reason of floods, windstorms and ice, and the danger of damage or destruction by ice is probably greater in the Susquehanna River than in any other river in the country (R. 667a-668a; 688a-689a; 698a). In addition, this particular bridge, because of the location of the adjacent highways, is liable to serious loss of revenue at times when the bridge itself is not seriously damaged. Thus in 1919 the water rose above the level of the adjacent highways, and when it receded it left the highways covered with ice which made them impassable for a long period and completely shut off traffic from the bridge (R. 669a). It is also subject to economic hazards arising from changes in volume and character of traffic, and the development and improvement of competitive routes of travel (R. 160a, 167a, 137a, 174a).

The financial history of toll bridges throughout the country has been a very unfortunate one, and for this reason high rates of interest are necessary to attract money to investments in toll bridge properties. At the time of the

making of the appraisal in this case the rates demanded for financing privately-owned toll bridges were so high as to be almost prohibitive, and for this reason it was impossible to finance them (R. 161a, 172a-173a, 177a-180a).

For these reasons Mr. Jacobs (R. 166a-167a) and Mr. Masters (R. 160a-162a) expressed the opinion that the rate of return should be from eight to ten per cent.

Accounts of the Company.

JAMES E. KEANE, a young man from the Accounting Bureau of the Commission was called as a witness by the Commission and presented a report which he had prepared in collaboration with Wm. M. Peifer of the same bureau. This report, identified as Complainant's Exhibit No. 1, and offered in evidence consists of a detailed study of the books and accounts of the company (R. 423-462a).

Other Evidence Presented.

P. F. DUNCAN, treasurer and director of the Appellant company, was called by the Appellant and testified with respect to the value of the company's real estate (R. 181a), the wages and salaries paid and the duties of the several officers and employes (R. 182a-187a).

The Appellant offered in evidence as Respondent's Exhibit No. 4, the material portions of the record in the prior case (R. 212a-215a) which will be found in this Record at pages 596a-792a. It offered in evidence a Special Tariff of the Pennsylvania Railroad, numbered G. O.-P. S. C. Pa. No. 4704, showing that by special order of the Commission a freight rate of 70¢ per ton on fill from Steelton to Clark's Ferry was obtained, effective Aug. 16, 1924 (R. 258a).

With the consent of counsel for the Commission (R. 420a-421a) the Appellant made and filed of record a summary taken from the official report of Joseph K. Costello, General Manager of the Delaware River Bridge Joint Commission to that Commission, showing the rates in effect Sept. 19, 1930, on 35 toll bridges throughout the country. This we have marked Respondent's Exhibit No. 5 (R. 793a-798a).

COMPARISON OF APPRAISALS.

Tangible Costs A. *Direct Construction Costs:*	*Quantities*	*Respondent's Ex. No. 1* Unit	Total	*Complainant's Ex. No. 3* Unit	Total	*Substantial Differences*
Bridge head lands	.....	.....	$11,350	.....	$11,350	.....
Clearing site	.....	.....	8,547	.....	8,462	.....
Bridge structure:						
1. Excavation and back fill	cu. yd. 2,500	$2.85	7,125	$2.75	6,875	.....
2. Approach fill	cu. yd. 10,616	2.10	22,239	2.30	24,417	.....
3. Pier excavation—loose	cu. yd. 2,008	4.45	8,935	4.50	9,036	.....
4. Pier excavation—rock	cu. yd. 300	10.65	3,195	10.50	3,150	.....
5. Drilling for dowels	lin. ft. 225	2.00	450	2.00	450	.....
6. 1:2:4 Concrete in pier and abut. footings	cu. yd. 2,034	16.20	32,950	16.00	32,544	.....
7. 1:2½:5 Concrete abutment shafts	cu. yd. 2,738	15.45	43,136	15.50	42,439	.....
8. 1:2:4 Concrete to 6' above spr. line	cu. yd. 2,674	16.20	42,444	16.00	42,784	.....
9. 1:3:6 Concrete 6' above spr. ine to road	cu. yd. 1,824	14.80	26,995	15.00	27,360	.....
10. 1:2:4 Concrete, arch rings, walls, etc.	cu. yd. 9,496	28.15	267,312	26.00	246,896	$20,416
11. 1:2:4 Concrete, railings, sidewalk, etc.	cu. yd. 867	27.75	24,059	28.00	24,276	.....
12. Concrete paving on approaches, etc.	sq. yd. 3,271	4.90	16,027	4.90	16,028	.....
13. Waterproofing, ret. walls and abuts	sq. ft. 10,700	.08	856	.08	856	.....
14. Elastite for expansion joints	sq. ft. 3,500	.40	1,400	.40	1,400	.....
15. Zinc plates	lbs. 14,950	.25	3,737	.25	3,738	.....
17. Reinforcing steel bars in concrete	lbs. 1,079,718	.0637	68,778	.046	49,667	19,111
19. Cast iron drain inlets	each 36	50.00	1,800	50.00	1,800	.....
20. Coffer dams	.....	.....	51,681	.....	42,000	9,681[1]
Electric light system and misc	.....	.....	27,427	.....	28,123	.....
Construction remaining from old bridge:						
Earth fill	cu. yd. 8,000	2.10	16,800	1.50	12,000	4,800
Stone retaining wall	cu. yd. 2,200	10.50	23,100	.....	21,583	.....
Contingencies	.....	.....	.....	.....	1,679	.....
Office building	.....	.....	8,100	.....	5,861	2,239[2]
Sub-total	.....	.....	$718,504		$664,774	

B. *Indirect Construction Costs*						
Engineering and supervision			43,027		43,000	
Administrative, legal and incidental			9,930		8,000	1,930
Interest during construction			38,145		22,000	16,145
Sub-total			$91,102		$73,000	
Intangible Costs						
Promotion and preliminary organization			10,125		8,000	12,250
Organization and incorporation			10,125			
Cost of financing			58,090		37,500	20,590
Interest on intangibles			3,980			3,980
Sub-total			$82,320		$45,500	
Grand total reproduction cost new			891,926		783,274	
Accrued depreciation			16,282		41,403	27,121
Cost of reproduction new less depreciation			$875,644		$741,871	
Add:						
Value of location			100,000			100,000
			975,644		741,871	
Deduct:						
Freight on Item 17		3,347				
Excess value of buildings[2]		2,239	5,586			
			970,058		741,871	

[1] The Superior Court added $8,000 to the Commission's appraisal of this item (R. 835).
[2] This item is not contested in this Court.